OHIO CULTIVATOR.

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The Horticultural Department.

For the Ohio Farmer and Cultivator.

THE KITCHEN GARDEN.

From the garden we obtain some of the most substantial comforts in the line of luxuries, that we are permitted to enjoy, and its proper cultivation is a source of economy. Every person owning a few rods of ground should till it in the best possible manner. I very much doubt the propriety, however, of the farmer devoting very much land to gardening purposes, for the bulk of corn, potatoes, beans, tomatoes, turnips, &c., can be raised in the field with at least one half the expense. Most garden spots are so arranged that a horse cannot be used thereon to advantage, and a great deal of hoe labor is required if properly cultivated.

A few very early potatoes should be raised in the garden, but those for general summer use and for the winter supply should be cultivated in the field where horse labor can be made to do the chief part of cultivation. Bush beans planted with corn in the field grow nicely. The beans should be dropped in the same hill with the corn, when planting, but separated by a few inches space, so that the roots will not intermix, and make hard pulling. The crop in this way may be raised without any extra labor, for they are plowed and hoed with the corn, and not drawing the same substance from the soil, are in no way injurious to the growth of that crop. Turnips sown in about the sides of the corn field do well, and as the seed is not sown until after the last plowing of the corn, the soil is ready prepared. A single tomato plant set beside a hill of corn will thrive nicely if in good soil, and may be tied up to the corn when laden with fruit, which will give them a fine chance to ripen off. My custom is to plant as many tomato seeds, when putting in corn, as I wish, one seed to a hill, and on the two outside rows of the field; they will mature and ripen off for fall use and canning; and they are raised without any other labor than putting in the seeds.

A farmer should by no means neglect the cultivation of a kitchen garden, but he should remember that his own time and labor is worth much more than that of the horse. A small garden can be made profitable if properly laid out and cultivated. The best of manure should be used; hog manure is good for vines, but well rotted barn-yard manure will not fail to make any kind of vegetation luxuriant if abundantly applied.

The selection of seeds is of great importance; none but the best should be used, and these planted at the right time. Nature will not be hurried, and nothing is gained by sowing before the earth has been warmed by the sun; but most kinds of plants may be advanced by sowing seeds in a hot bed, and setting out when the earth is ready to receive them. If every man would save his own garden seeds, which would require but little time, the annoyance of being compelled to re-sow a dozen times and getting a poor quality at last, would be avoided; he would know the seed to be fresh and good, and have it ready when wanted. ERASTUS.

SHEEP VS. BORERS.—A New Hampshire farmer has discovered that his orchard in which his sheep were pastured was free from borers, and other noxious insects, and very thrifty, while an adjoining orchard, in which no sheep were allowed, was neither thrifty nor exempt from these borers and insects. He thinks the presence and odor of the sheep drive off the insects.

CULTURE OF FRUIT TREES.*

BY F. R. ELLIOTT, CLEVELAND, O.

As a correct understanding of vegetable physiology, of the nature and growth of trees, is essential to enjoyment, in its true sense, of tree culture, and also to complete success in bringing about desired results, it is thought best, before entering upon the modes of cultivation and description of varieties, that short descriptions of the structure of the seed, root, stem, &c., be prepared; for no profession has so much to contend with, in a scientific point of view, as the grower of trees and fruits.

OF SEEDS.

The seed is a deposit matter partaking of both root and stem, and undistinguishable components to produce at its proper period, fruit. By the systematic order, which vegetates all nature, the seed of the apple, pear or grape, produces wood, root and leaf unmistakeable in appearance; but its *variety* is, when wrapped up within the corticle of the seed, impossible to be determined.

Seeds taken from a Baldwin apple may produce trees and fruit similar to the parent, or they may produce fruit entirely unlike it. This is caused by the mingling of fertilizing matter when the tree which bore the seed, was in flower, and of which hereafter.

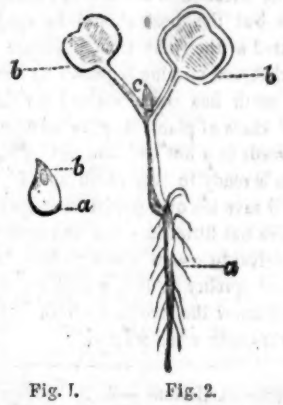

Fig. I. Fig. 2.

The *corticle* (a Fig. 1) is the outer covering of the seed or embryo plant; the *germ* b, is the point from which commences growth. In seeds that are perfect, this germ is always nearly white, but if the seed has been heated, or become exhausted by evaporation from age, the germ will exhibit a blackened or discolored appearance. As the germ commences to grow, it exhibits three parts: first (a, Fig 2,) the *radicle* or root, which descends; b, b, *cotelydons*, or rudiments of the first leaves that appear above the ground; and c, the *plumule*, which forms the stem.

GERMINATION.—Air, heat, moisture, and exclusion of light are all requisite to healthy and certain germination or growth of seeds. These must br regulated by the character and size o the seed to be grown. Small seeds require less depth of covering than large one, because of the lesser corticle, and also because of the weaker germ, rendering it less capable of reaching the surface. Too deep covering, it is well known, will cause seeds to remain in the ground a long time without vegetating. This is in consequence of want of air and heat. Again, this varies with classes of seeds, some germinating freely at a temperature in which others would lay dormant, or decay. Heat with appropriate moisture sets the vital principle in action, expands the air in the cavities of the seed, and produces distension that must be continued to a healthy growth, or result in immediate death.

After being once excited into activity, there is no intermediate stage of repose. It is from a want of this knowledge, that so many are disappointed in their seeds. Early in spring comes a few warm days, when, if seeds are planted, and after a few days examined, they are found all swollen, and apparently about to push the radicle or rootlet; next week comes a week or more of biting cold, chilling the earth of the little warmth that assisted in the first state of the seed, and the planter looks in vain for his plant to appear above ground. The check in its then tender state has produced death.

OF ROOTS.

THEIR GROWTH.—The immediate cause of roots is one of the mysteries of vegetable production. We know that exclusion from light induces the most rapid development; and, that if to be created other than from seed, woods of a soft cellular character produce them most readily. Moderate moisture is also necessary for their developement, and, while they are not buds, yet it is necessary for their production and maintenance, that leaf buds and leaves exist in connection with the stem from which roots are desired to be grown. Practical cultivators, as yet, are all in the dark upon this point of root production; hence the difficulty of growing plants from different varieties of woods.

*From an Essay on the Culture of the Apple and Pear, in Ohio Agricultural Report for 1864.

In seeds, although the first appearance of the root in the embryo plant, at the time of germination, precedes the expansion of the seed leaves, yet the young root will not live unless the seed leaves are enabled to act. Thus, as the root developes itself and pushes downward, the stem and seed leaves grow toward the surface, which having reached, the elongation of the roots is at once checked, and it appears to assume the functions attributable to it in the production of growth in the plant.

That roots absorb food from the earth, extending as the supply becomes exhausted, has been proved; but this enlargement and extension is, at the same time, attributable to the return through the stem of organizable matter, elaborated by the leaf. This return of matter is supposed to form new layers horizontally and longitudinally, thereby creating increased size with extent in length. The correctness of this theory is sustained by the fact that, denuding the tree of its leaves, at once checks rapid extension of the roots; and if the foliage is long kept off, and the starting of dormant buds be prevented, roots and stem soon die.

Again, as roots are most active in the spring and early summer, when the foliage is rapidly developing, if the denuding process above named be then performed, death is certain. But if such denuding process be omitted until midsummer, the roots apparently receive little or no check; on the contrary, they appear to be furnished with the power of perpetually adding new living matter to their points, and continue to extend themselves as the food in contact becomes consumed.

Thus, theory, while apparently contradicting itself, is in reality supported; and as roots are never found inactive, except when frozen, this absorption and elongation must arise from continued circulation, however sluggish, and measurably irrespective of the stem, thereby increasing the natural period of rest, and storing up food in the interior, to be distended and vigorously applied to rapid growth on the approach of spring.

As a general rule, roots have no power of choice to absorb elements only adapted to their wants, but they take up everything in a soluble form, and on its reaching the leaves, its healthy or poisonous character becomes visible. Exceptions to this rule have been found, but as a whole, the rule holds good. It is by some writers held, in theory, that on the return of the elaborated juices from the leaves, certain matters, poisonous in their nature, are given off at the extremities of the roots, thus making the spongioles act a double purpose. This theory comes from the fact, that, in practice, it is found difficult if not impossible to grow trees healthily in ground previously occupied with the same variety. We incline to the belief that the difficulty arises more from the exhaustion of suitable soluble food in the soil, than from the creation of poisonous elements, by exudation of excrementitious matter from the roots of the previous occupants.

In general, roots have no apparent buds, and, therefore, cannot readily be used to increase the plant to which they belong. Exceptions to this rule are, however, found in the Paradise Apple, the Quince, and many others which readily grow from pieces of roots. We have grown some cherries and pears by this means. So that experiments are requisite to decide respecting each variety.

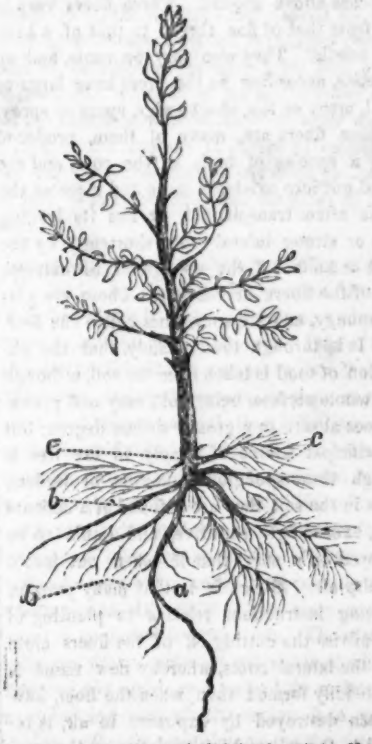

Fig. 3.—a, main or tap root; b, lateral roots; c, fibres or rootlets; d, spongioles; e, crown or collar.

Roots have, beside these general rules, their separate orders of position and uses, and for a better exposition of the subject, we have sketched Fig. 3, and marked it as illustrative of the

terms in common use for each root or part. *a* is the main or tap root, which in seedlings undisturbed, if the soil be not too hard, usually penetrates the earth vertically. In this drawing, the tap root originally produced by the seedling has been once cut away, and what we now point out as the main root is that root which has become the strongest, and taken the place of the original or seedling tap root. *b* are what are termed lateral roots, diverging from near the crown and main root, and usually, if not always, corresponding in number and extent to a like number of branches or main limbs on the tree above. Examination exhibits the fact that if, by some cause, a tree, while young, loses its branches upon one side, and extends them upon the opposite, the lateral roots are found to exist only on that side, and immediately under the existing branches. *c* are fibers or rootlets, not perfectly but in great measure corresponding with the twigs and spur-like branches above ground. These fibers vary in size from that of fine thread to that of a knitting needle. They also vary on roots, and on varieties, according as the trees have large or small, many or few, short twigs, spurs or spray.

These fibers are, many of them, produced from a species of buds in the root, and are forced out into existence more and more as the tree is often transplanted, or has its leading main or strong lateral roots shortened by the spade or knife. *d*, the spongioles or extreme ends of the fibers or rootlets. These are porous, spongy, and are sometimes called the feeders. It is through these, mainly, that the absorption of food is taken from the soil, although their whole surface, being soft, may and probably does absorb in a greater or less degree; but the principal source of supply to the tree is through these spongioles, mouths, or feeders. When in the soil, they are soft and of a delicate tissue, exceedingly sensitive, and liable to be destroyed in a short time if taken out into a cold, dry air. Hence it is that many persons, in giving instructions relative to planting of trees, advise the cutting off of the fibers close up to the lateral roots, whereby new tissue is more readily formed than when the fiber, having been destroyed by exposure to air, is returned to the soil and left to decay on the root.

It is attributable to the complete preservation of these fibers, that deciduous trees are enabled to be moved succesfully in midsummer. The air being warm, and moisture being added to the soil in its then warm condition, rapid action of the rootlets is induced to supply the continued demand of the leaves. *e* is the crown or collar, injury to which is more permanently felt by the plant than any other part. In grafting to change varieties, this point, when it can be done, is selected for insertion of the graft, because of its immediate connection with the root. Seedlings have this crown or collar perfectly developed, while in trees or detached from the natural crown, this crown or collar is not so readily or so perfectly developed.

Buds.—All buds are deposits of matter, elaborated by the leaf passages, and partaking of two separate, determinate characters: one the capacity to reproduce a separate plant, if detached from its parent, and partaking in every particular of the habit and character of that parent; or if left upon the tree, it may become a branch. The other has capacity, from its components, to produce fruit if left to remain upon its parent; but rarely can it be transposed to another tree and continue its natural office. The former is termed a leaf bud, and the latter a fruit bud.

Leaf buds change to fruit buds, but fruit buds do not return to leaf buds. It usually takes place in the buds that are weakest in the first year's growth; and the change occurs during the second year.

The size, form and prominence of buds is a distinguishing feature in the identification of varieties, of which hereafter.

"Practically considered," says Barry, "buds are classified as follows: *Lateral*, those on the sides or circumference of shoots, being the *axillary* buds of the botanist, *terminal*, those on the points of shoots; *superior*, those on the upper sides of horizotal branches; *inferior*, those on the lower side of horizontal branches; *stipular*, the small, barely visible buds, found at the base of ordinary buds; and *dormant* or *lateral*: these are scarcely apparent buds, generally towards the base of branches. They may remain dormant for several years, and then n some species be excited into growth by prunning close to them."

A Leaf is composed of two principal parts; the leaf stalk or petiole, which connects it with the tree or branch on which it is borne, and the expanded part called the blade. The base is the end attached to the stalk, and the apex or point the opposite one. The length is the distance from the base to the point, and the width a line at right angles from margin to margin. The leaf stalk and its branches, forming

the nerves or veins of the blade, are composed of woody vessels, in the form of a tube, similar to the woody parts of the tree or branch that bears it, inside of which is a pith, similar to the pith of the tree: the leaf is thus connected with the pith and wood of the shoot. The veins of the leaf are filled up with cellular substance similar to the pith, called *parenchyma*, and the whole is covered with a thin skin or *epidermis*.

In identifying varieties, the forms and colors of leaves are often serviceable. These forms are not mathematically correct, but comparative. They are illustrated in the accompanying plate of leaves, drawn from specimens selected from different varieties of the apple and pear. Beside the forms, the margins of the leaf have also destinctive traits, indicated in their sharp or rounded points, and these are termed *serratures*. Leaves are also folded, waved or flat, all of which conditions are features that indicate varieties. In our plate, 1 is *roundish oval*, with *crenate* edge; fig. 2 is *lanceolate* in form, with course *serratures* or edge; fig. 3 is *folded lanceolate*; fig. 4 is *round* o *roundish*, and flat; figs. 5 and 6 are *ovate*, partially folded; fig. 7 is *reflexed*, the point being turned backwards; fig. 8 is *oblong*; fig. 9 is *roundish lanceolate*; fig. 10 is *oblong, waved*. The leaves of the grape are termed *lobed*, as the edges have two, three or more deep angles; they are round lobed, acute pointed lobed, three lobed, five lobed, etc., etc. They are also rough or smooth, as the upper and under surfaces present such an appearance; and *downy*, when the under side has a white substance that can be rubbed off with the hand.

Fall of the Leaf.—The fall of the leaf is, in the minds as many persons, attributable to the action of frost, but where no frost occurs the same fall is existent, because of its natural order of duration. Having performed the part allotted to it, the passages are choked up by deposit of sedimentary matter, it changes color, ceases to decompose carbonic acid, dies, and is thrown off. This fall of the leaf is going on from the commencement of early summer until the close of the season. It differs in varieties, some casting leaves numerously even in June and July, others not until near the close of the season.

Berry Culture.—At the late meeting of the N. Y. State Ag. Society, J. Stanton Gould said he had a word to say in reference to berry culture on land along the Hudson. One of the trains on the Erie Road was every day loaded with berries, during the season, on their way to market, and the steamboat that left Piermont was also loaded with this kind of fruit. There was a large number of farmers that cleared $600 per acre in the culture of berries. He referred to one man who had ten acres in small fruit, whose gross sales last year were $6,800, and the whole expense for cultivating, picking and marketing was only $800. The same region grows the raspberry to perfection. The strawberries are grown between grape vines, which are set ten feet apart, and trained to stakes.—The underlying rock of the region is a gray stone or mill-stone grit, known as the esopus formation. The runners of the strawberry plant are cut off every morning, and wherever a runner is cut there is a fruit stool.

The sun, in parting, thrills the heavens, as one's soul is thrilled in the hour of separation.

ORNAMENTAL TREES.

BY THOMAS MEEHAN.

On Raising Trees.—For reasons already explained in the last section, trees are far better for the planter when raised artificially. Each tree's peculiar treatment will be noticed in another part; here we may note a few generalities.

Whenever it is convenient to raise trees from seeds, they will become most vigorous; though, under favorable circumstances, cutting layers or grafts, will sometimes equal or excel.

Many seeds lie two years in the ground before they grow. Anything that will assist the decomposition of their shells or outer cases hastens their germination. Applications of oxalic acid, or boiling water, have been found useful, as well as allowing the seed to lie in a heap and ferment; or even by freezing them for a short time by packing them in ice. It is a fruitful field: but few discoveries have been made in it.

The Best Size for Transplanting.—This is a much disputed point. There are many good reasons for preferring large trees. The man who has become superior to the active duties of business, through a long course of years, and desires to pass the remainder of his days in the peaceful retirement of a country-seat, cannot afford to wait till young trees grow up with their grateful shade. He will prefer large trees. Taken up properly and at a proper season, they will succeed perfectly, and the immediate object be gained.

Such trees, however, never grow with luxuriousness. Young thrifty trees, under favorable circumstances, equal them in a few years, and eventually go ahead. Besides, there is great pleasure to be derived from watching each year's luxuriant growth. The gratification which immediate shade is calculated to afford, is more than balanced by the pride we feel in pointing to a thriving tree which, but a few years ago, we could have put into our coat pocket.

Where trees have to be procured from a distance, or a nursery in general, young trees should always preferred. The haste unavoidable in a nursery at the planting season, is unfavorable to great care in lifting them; while the readiness with which small trees can be taken up, and the facilities they afford for careful packing, is a powerful argument in their favor.

The Best Season to Plant.—When the principles of successful planting are understood trees can be removed at any time. A tree on being transplanted is, in some respects, in the condition of a cutting. Let us inquire, then, what are the principles of propagation?

Cuttings are taken generally from half ripened wood, are planted in light or sandy soil, and plunged in material a few degrees warmer than the atmosphere. Over the cuttings bell-glasses are placed. These are the main points—variations being made to suit peculiarities of each kind. Now for the principles. Half-ripened wood contains the "descending sap," out of which roots are formed. Cuttings are "too young" when the sap has not been elaborated; "too hard" when the descending current is feeble, or has ceased. The sandy soil admits air, which is essential to the formation of roots Bottom heat excites the base of the cutting, encouraging it to form roots before the top starts into active life. Bell-glasses prevent evaporation from the leaves and stems, checking their demand for nutriment till the roots are formed to supply them. Let us carry this illustration to our subject.

In planting, the immediate object is to get a speedy formation of new roots or fibres. The best time to plant, then, will be when the earth is a few degrees warmer than the atmosphere. and when elaborated sap is descending and active and the tree itself least likely to suffer from evaporation. That time is the autumn; at the fall of the leaf.

Autumn planting, however has its disadvantages. The soil is generally very dry and unmanageable. The tree comes up with difficulty, and the new fibres dry up as fast as they push. Another disadvantage is, if we wait till the fall rains have deeply penetrated the soil there is danger of having to leave the operation unfinished by frost. If the planting be not very extensive, it is much better for the tree to apply water when requisite, and have it done in the best time. The future health of the tree will repay the additional expense.

Spring planting is most usually followed.—The ground is so pliable, it seems to save so much labor, and the work can go right ahead to completion. This is all that can be said in its favor.

Winter planting, or the "frozen ball" system, is sometimes adopted. In the early part of the winter, a hole is prepared for the tree, and the tree itself prepared with a "ball" just ready for removal. When the ball is frozen through,

it is taken off to the spot prepared for it, suffered to thaw, and then the hole filled up. I do not approve of this system, having seen it fail on a very extensive scale. The frost and atmosphere together, seem to act injuriously on the cut and exposed roots; besides, as I have already observed, no amount of "ball" can compensate for a want of fibres.

Though I lay down the rule that autumn planting is preferable under most circumstances, it can be carried out in any season of the year. I have planted in every month for experiment sake. The worst period is just after the tree has burst forth its leaves in spring. Success is more probable every succeeding month till the fall, when the most favorable period for the process has arrived. There is a regular ebb and flow, like the tides and the seasons, in the rise and fall of the sap.

I will give one illustration to accompany the last paragraph. In one of my situations, a fine apricot-tree had to be transplanted or destroyed, in the month of June, to make way for some alterations in a carriage house. The fruit was at the time as large as pigeons' eggs. The young shoots were cut back, as far as they seemed "watery" to check evaporation. The roots were watered, and covered with damp mats as fast as they were exposed. It was taken out without the particle of a ball, planted at once, and finally well watered. Not a leaf withered. It was not watered again the whole season. The next spring it was a sheet of blossom, and had the curculio been well disposed, would have borne a splendid crop.

ON THE CHOICE OF TREES.

For shade trees it is considered advantageous to possess the property of transplanting easily. This is a great reason why certain trees become so popular in some districts as to give them a character. But, in reality, there are no trees difficult to transplant. When the true principles of the operation are understood, a beech may be transplanted as easily as an ailanthus, or a sour gum as a maple. This I hope to make plain to the reader as we proceed.

In choosing trees, prefer those raised a a nursery to those growing naturally in the woods. Most persons are aware of the difficulty of getting the latter to do well. A glance at the nature of roots will teach us the reason. There are two sets of roots to most trees, perhaps to all. One consists of *fibres*, the sole office of which is to draw matter from the soil for the use of the tree; the other of *true roots*, which extend and keep the tree in its position, affording at the same time channels for the conveyance of the matter absorbed by the fibres.—This distinction must be well noted. Fibres, as I have repeatedly proved, are *annual*, dying out after a season's service. New fibres make their appearance as the extending roots grow; and are, consequently, farther away from the collar of the tree in proportion to its age.

The roots of trees have their peculiarities of divarication as well as the branches. Some trees grow erect or horizontal, making few side shoots, and looking always sparse and thin; others branch and re-branch in every direction. So it is with their roots. The sour-gum throws out a few strong roots, scarcely making a single fork; while the linden throws out an abundance of rootlets in every direction. If we attempt to take up a specimen of the former by the common practice, that is, by opening a trench but a few feet from the trunk, we find that though we may have a great many *roots*, we have very few or no *fibres*. They are left with the roots in the ground, at their extremities. Such a tree is reduced to the condition of a mere cutting, and without the treatment proper for a cutting, cannot grow. Trees taken up by the same mode, that have an abundance of branching roots, are more likely to have fibres near the stem, and so succeed. This constitutes the chief difference between a tree that will "remove easily" and one which will not.

It should be an early inquiry whether a tree proposed to be transplanted have the above mentioned conditioned success or not. A tree from a nursery has been transplanted when very young, perhaps several times. The repeated cuttings off of the young roots cause them to branch out numerously, attended, of course, by an abundance of fibres. That is exactly the tree for the planter. Trees from the woods will be in a worse case. Where they are particularly desired, there are two ways of procedure. We may dig out a space two feet deep, at from four to six feet from the trunk of the tree, according to its size, which will cut all the roots to that depth. Immediately replace the earth, into which they will fibre. The following year the tree may be removed with safety. In the other case, the roots should be followed to their extremities, the fibres gathered together carefully, and rolled up with the roots towards the trunk of the tree, where they can

be protected from injury. The ball of earth on which so much care is given to cultivate trees, is of little importance in this case. There being but few fibres at the base, the ball can be of slight service, while it materially adds to the expense, and is actually a drawback by rendering the tree more unmanageable.

In these two modes of removal, success greatly depends upon the operator; a careful, persevering, determined hand, performs more and with better results, than a hasty, undecided and upractical individual. The latter mode, in the right kind of hands, will give the most satisfaction is the end.

HINTS ABOUT EVERGREENS.

In reply to several inquiries respecting the proper time to transplant evergreens, we answer that our own experience has induced us to prefer from the 15th of March to the 15th of May, as a choice taking the latter half of this period. Even when the tree has shot half an inch, it seldom fails to grow; provided, that it has been carefully lifted in the nursery and carefully set down again. Its growth, it matters little of what variety it may be, is as certain as any other tree. We scarcely have ever lost one.

In transplanting, however, they should be well secured by a strong stake, which should be at an angle of 45 degrees, pointing northward. Unless this is done, the high winds of spring, meeting with full resistance, may loosen the roots and kill the tree.

For an an ornamental hedge, there is nothing equal to the Hemlock Spruce; it grows equally well in sun and shade, though it is most beautiful and luxuriant when shaded about half the day, and the soil is cool and rather moist. A mulching of dead leaves or manure is excellent for the hemlock. When exposed to the sun, the American Arborvitæ makes an excellent hedge. It readily grows and is perfectly hardy; but it does not answer where there is much shade, becoming stunted in its growth, and ragged at the bottom.

For sheltering a northern exposure, or protection against any undesirable view, there is nothing equal to the Austrian Pine. It is almost like a wall of iron, bearing more rough usage than any other evergreen. The northern blasts beat harmlessly against it. And although it is a hard-looking, robust, masculine tree, it is, at least to us, extremely pleasant to the eye.

As a choice of evergreens, we should, as a rule, prefer the true Norway Spruce, the Hemlock Spruce and the Silver Fir. The latter requires considerable room, unless kept in by pruning, as its branches usually take a horizontal growth, like the Silver Pine. All Evergreens will bear pruning to almost any extent. Every grower can suit himself as to shape.

In selecting evergreens of all kinds, be sure to take those with uniform branches down to the ground—a straight, undivided main stock, with numerous thin branches, drooping a little if possible. After transplanting, mulch with barnyard manure, to the extent of the branches, and once a year lightly fork up the soil underneath and keep clear of grass until the tree attains ten or twelve feet in height. An annual application of manure will produce a rich dark green foliage.—*Germantown Telegraph.*

CULTIVATION OF THE PEACH.

As I expect you, as well as myself, are fond of peaches, I wish to give some of my experience in the culture of the peach tree. I have frequently been told by horticulturists, that with a little care I could have peaches every year, and out of the last six years we have missed but one.

I have between 300 and 400 bearing trees and as many more coming on. I have, I suppose, as many different qualities of land as can be found on any farm in this part of the country, from the rich pawpaw patch along the creek, to the poor huckleberry knob. On slopes, north, south, east and west, I have peach trees growing, but those on black free-stone land and northern slopes seem to do the best. But in all locations, that fell destroyer of the peach tree, the borer, or grub, seems to commit his depredations alike.

Now I wish to inquire of your readers, if any of them have a preventive. I will here give my cure: I take a stick and sharpen it at one end, with which I probe round the tree at the ground, wherever I see the gum oozing out. Then with my pocket knife scrape the bark till I find where the rascal has entered and follow his track till I find him, when I dispatch him quick. This is the only sure cure I have yet found.

I have a few trees standing close round the hen-house, that have borne fine crops, and which the grub has never seemed to injure.—Whether the hens destroy the insect that lays the egg, or there is some other cause for it, do not know.—*Cor. Highland News.*

GRAFTING GRAPE VINES.

A correspondent of the *N. Y. Farmers' Club* writes:—My plan, pursued for several seasons with uniform success, has been to graft as soon as the leaves of the vine begin to develop, which here has been about the 24th of May, I set scions in split stock below ground. If in the cane above ground, I lay the cane well in the ground, say six inches, and leave one bud of graft above the surface. I have three buds on the scion used, and pare so as to bring one of the buds at the shoulder of the stock. One bud is then below and one at the surface. I always feel sure of growth if my scions have been well kept. To preserve them, I take cuttings at any time between November and March, keep them in a warm cellar until the ground is thawed out in spring, then bury them at least 18 inches deep in open ground until wanted. This care is necessary to prevent the buds from swelling in the warm days of May. If kept in the cellar, they are apt to get too dry for use. I grafted Delawares into a hardy native on the 24th of May, 1862, which made 15 feet growth the same season.

PLANTS IN THE KITCHEN.

The warm, dry, confined air of heated rooms is not congenial to plants, hence the failures of parlor gardening. By providing intervening sashes between the living room and the place assigned to plants—a bay window for instance—the plant room may be more thoroughly ventilated, kept moist and cool, and in this condition they thrive well. The heat is obtained by opening the windows directly into the living room. In such a place, in addition to the pots of flowers, tomatoes, cabbages, lettuce, egg-plants, etc., may be successfully grown in boxes and finally transplanted into the open ground. They *may* be grown without such provision, but require more care. Provide long narrow boxes to sit on a shelf in the window and sow the seeds, covering lightly and pressing down the soil. Warmth and moderate moisture will soon bring them up; after which they must receive as much air as possible on warm days; watering frequently, but not enough to keep the soil damp on top. A frequent sprinkling of the foliage is beneficial. Guard against the extremes of great heat by day and cold by night. After growing two inches in height it is well to transplant into other boxes, leaving them at such a distance apart that each plant may be taken out separately with earth attached to the roots. In this manner plants may be raised without a hot-bed. Dug out turnips are sometimes used, set in boxes of earth, and when transplanted into the open soil, the turnip with its one or two plants is set in the ground. It soon decays, and the roots push through the sides. From the middle of March until the first of April is a suitable time for sowing the seeds. —*Tribune.*

STOPPING ROOTS OF TREES.

I find an article in a late number of the *Telegraph*, recommending digging "deep trenches and filling them with concrete, to confine the roots of trees to certain limits." I will give my mode, which is perfectly effectual, and much less expesive than concrete:

I sink a trench deep enough to cut off all the roots that would injure plants in adjacent ground; then set a row of slates in the trench so that they will break joints and overlap each other three fourths of an inch at the joints. As the slates are set, fill in the earth against them on each side of them by ramming it firmly. I set them so that the upper edge of them is well covered with earth. I find that slates set in this manner form the most effectual barrier against ground moles.—*Cor. Germantown Tel.*

AM. POMOLOGICAL SOCIETY.

The 11th session of the American Pomological Society will be held at St. Louis, opening on the 4th of September next. All societies in the United States and British Provinces having fruit or earth culture as their object are invited to send delegates, and all individuals interested in fruits are solicited to attend. A cotemporary says that this meeting will afford the pomologists of the East a fair opportunity to see this Central and Western World, and the peculiar interest which the people of the great prairie oceans feel in the production of what is most healthful and at the same time luxurious, will insure a full representation from the West. Among the prominent questions to be considered, is that of revising the Fruit Catalogue of the society, for which committees are now engaged in local investigations. All Pomological and Horticultural societies have been requested to compile fruit lists for their districts; and it is expected that such a catalogue will be made as will open to the plant-

ers of every latitude and longitude a knowledge of the best varieties adapted to their soil and climate. Members and delegates are requested to bring specimens of the fruits of their districts. This will constitute a most interesting exhibition, and all persons who desire to change their residence and would make fruit an object, will be able to judge of the whole country by looking into the hall at St. Louis during the session of the society. It will continue in session several days.

FACTS AND FIGURES ABOUT STRAWBERRIES.

Until the recent formation of the various county societies throughout many of the States, for the collection of pomological information, first suggested and called for by the American Pomological Society, we had few or no facts concerning the various crops of fruit in the several States, or any definite knowledge of the quantity produced. We are yet without a great deal of reliable information of this kind, but some progress has been made towards this most desirable result, and in time we hope to have accurate reports from every part of the country, showing not only the quantity of fruit produced, but the varieties which have been proved most certain and reliable, as well as the most profitable to cultivate.

Frequent assertions are yearly made of the product of 300 to 400 bushels an acre of the Wilson, and scarcely a new seedling is introduced but what is reported to produce twice as much as any previous sort. But the New Jersey cultivators have set this at rest, and although there may have been instances of very high culture where upon some favorable spot, in a small bed, the produce has been *at the rate* of 300 bushels to the acre, we think it will be very difficult to find a cultivator who can show, by actual measurement, he has raised one third of the quantity upon a whole acre. It is the product on a liberal scale of culture that will test the value of any variety, and this we have in the report before us.

In March, 1865, a committee of the West Jersey association was appointed to procure information relative to the kinds of strawberries cultivated, and the quantity produced.

The general average per acre was 55½ bushels; viz.: Burlington 45, Beverly 56, Chester 82, Cinnaminson 83, Evesham 55, Newton 43; and the average price per bushel $4.60. The yield and price are both a trifle lower than last year; the former is accounted for in Beverly from the fact of the growers there falling into the practice of neglecting cleaning, preferring to renew the beds after two crops have been taken.

The varieties generally cultivated for the last season's market, were Wilson's Albany, French's Seedling, Downer's Prolific, Cutter's Seedling, Lady finger, Hovey and Iowa. The Wilson is the main dependence in Burlington and Beverly though almost discarded in other townships.

The old plan of planting and cultivation is still the only one which meets with approval here. It is that of setting in rows five feet apart, and from ten to eighteen inches in the row, according to the vigor of the variety, and training into beds from three and a half to four feet wide, and covering in the early part of winter with fine stable manure. After picking they are sometimes cleaned and allowed to fruit a second season, though it is becoming common to pick them for a single year, it being considered less expensive to raise a new than to clean an old bed, and that the former will yield a larger crop; though the Lady Finger is reported in Beverly to pick far better at its fourth fruiting, if well cared for, than at any previous year.

The French, Cutter and Downer are cultivated in Chester and Cinnaminson with marked success. They are all vigorous and rapid growers, and large producers of good sized fruit; qualities which under our system of cultivation are most desirable. The first great desideratum is vigorous and rapid growth, since we must be able to make beds with certainty in a single season; next we want the fruit in abundance and of good size. The latter good qualities without the former are worthless under our system. Perhaps no other three varieties thoroughly tested here, are so satisfactory as those named above. The Lady Finger at times yields enormous crops, and being the finest berry we have for market purposes, is then very profitable; but it is too uncertain to be extensively relied on.

The Agriculturist, New Jersey Scarlet, Green Prolific, and Tribune strawberries promise well. The Green Prolific is a strong plant, with very hardy leaf, and is exceedingly productive. The berries are large, but a little inclined to be soft. Churchman's Great Eastern is a strong vigorous plant, throws out but a few runners, and

produces an abundance of large fruit; is well adapted to hill culture. Russell's Prolific and Triomphe de Gand, though doing well on very strong rich soil, are not adapted to this locality for general cultivation.

The French, Cutter and Downer are cultivated in Chester and Cinnaminson, and these, it appears, yield nearly one half more than the Wilson, the latter being in fact "almost discarded" in all the townships except those first named. The relative market value is therefore at once established.

It appears that New Jersey cultivators are adopting the Belmont system of picking the bed but one year, "it being considerably less expense to raise a new, than to clean an old bed." Undoubtedly they are right.

Unfortunately we [at Boston] have not the statistics of the actual crop of the strawberry cultivators in our vicinity to make a general comparison, but we have such results of the Belmont growers as will enable us to compare them with those of the New Jersey growers. We have the evidence of several cultivators,—and no doubt if pains were taken the whole might be obtained,—which may be taken as a fair average of the whole. Messrs. Wellington, Patterson, Locke and others, the largest cultivators, inform us that the product of their plantations is about 4000 quarts,—that is, 128 bushels, to the acre; often it exceeds this, having reached as high as 4500 quarts. The varieties cultivated are the Hovey, Jenny Lind and Brighton Pine.

Here we have nearly three times the quantity produced of that of the New Jersey cultivators: whether this is to be attributed to the varieties or modes of culture is not fully established; but the inference is from what the committee state that the systems are similar, that the greater product results from the varieties cultivated rather than from the mode of culture.

After all that has been said about the productiveness of strawberries, it is gratifying to have these established facts, and we hope that other societies in various parts of the country will endeavor to collect similar statistics, which will be of great value. There will then remain no doubt of the actual worth of any strawberry. At present, only those who investigate the subject themselves are aware of the very great difference in the value of many fruits; but let this information be general, and the whole public will be immensely benefited, and saved from disappointment and great loss.—*Hovey's Mag.*

CULTIVATION OF CURRANTS.

We notice that the cultivation of the Red Currant has much increased within a year or two; and when is considered the value of this fruit over many others, for pies when green, for wine, jelly and drying, the surprise is that a more general importance was not long ago attached to it not only as a garden, but a field crop. It is in every way a wholesome and desirable fruit, and one of the very easiest to propagate and cultivate. For increasing the supply of bushes, take last year's wood, about a foot or fourteen inches in length, where they are desired to stand or otherwise, press the ground around them firmly with the foot, and there will rarely be a failure. If a single stem, in tree fashion, is prefered, remove with a knife all the eyes on the part of the cutting which goes beneath the surface of the ground. If a bush is preferred, let the eye remain. So far as production is concerned, we think the bush is rather the most profitable, and may also be the longest lived.—*Germantown Telegraph.*

PROPAGATING BY CUTTINGS.

Propagating by cuttings is not nearly so well understood by people generally as should be. We may say by gardeners, generally. Nearly all soft wood will grow from cuttings, in the hand of a careful person. It is a common way to multiply grapes, currants, gooseberries, &c.; but few persons, unacquainted with horticulture, will attempt the same thing with flowering shrubs, which are usually "laid down," with which there is not the least difficulty, though with some the success is not so uniform as others. All the arborvitæs can be propagated by inserting the branches of last year's wood four or five inches, without removing the leaves.

Prepare the bed, dig deeply, pulverize the soil well, and put it in good order. To be sure of the cutting growing, it should be inserted five or six inches in depth, and place from four to six inches apart, the earth being placed firmly around them. They should be mulched, and watered moderately daily in warm weather when the ground is dry. They can be either potted in the fall, or let remain over winter, slightly protected with a little straw or long manure.

Amateurs should plant grape-cuttings with two eyes, the upper eye being placed a little below the surface of the ground.—*Germantown Telegraph.*

The Poultry Department.

For the Ohio Farmer and Cultivator.

DOMESTIC POULTRY.

BY J. C. COX, OSBORN, GREENE CO., O.

THE BANTAM FOWL.—Our little friends, the Bantams, as their name clearly implies, came from Bantam, in the Island of Java, which we know is famous for pepper. It is known that there are several varieties under this head, none of which are destitute of elegance, and some are particularly beautiful in plumage and pleasing in actions. All are, or should be, to be a Bantam at all, of extreme small size—the smaller the better and more valuable in point of fancy, lively and vigorous, exhibiting in their movements, both stateliness and grace. It may with propriety be termed the Liliputian fowl of the Gallinaceous tribe, and stands comparatively, in size, to that of the Malay or Shanghai, as the stately Durham to the diminutive Alderney.

BEMENT says there can be but little doubt but that it is to the Islands of the Eastern Archipelago that the origin of this fowl must be referred; but says it received its name from the town of Bantam in Java, from whence it was first brought by the Dutch. What color or variety they were at that time is unknown, but since their introduction into Europe and United States this breed has ramified by various crossings and experiments into the many varieties the race can lay claim to. They are classed as follows: Black African, Silver Laced, Golden Laced, White, with rose comb and clean legs —White Java, Booted, Red, Black, Nankin or Yellow, Dominique; and many other colors. In fact there is a Bantam for "any other variety, as an author writes, that is a Bantam corresponding in color to nearly every other variety of larger fowls. There are some very pretty single combed Black-Red Bantams, which are termed Game, for their pugnacious qualities. The African Cock has a full rose-comb, similar to that of the Hamburg fowl, with wattles and face of same hue, and the ear-lobes, like the Spanish, perfectly white; his plumage is glossy black, reflecting purple tints with brass-colored or reddish spots on his back, which, however, is not common; tail ample, flowing and sickled; short, sinewy, clean legs, of a dark color: he has a waggish impudent eye, self-satisfied air and gait. The hen is dusky black with her comb and wattles small, of a dull leaden hue.

In respect to determined courage, the African Bantam will yield to none—no matter who the foe, even the turkey-cock, to whom they are opposed, or the cause of contention, they fight to the last, and fowls treble their weight are often forced to yield. The African varies in size and comb, some nearly two pounds, but seldom over one pound in weight for the cocks, —hens one third less. Some very fine specimens have single combs. I have known the latter to breed superior rose-combs and the rose-combed to breed also single combs, and all extremely small.

Divest this Bantam of its sickle feathers and they would pass for fan-tail pigeons. Bement says "he is in appearance a pleasing little fellow, though an impudent consequential little atom! He is more jealous, irascible, and domineering, in proportion to his size, than even the thorough bred Game-Cock.

The Sebright Bantams both Silver and Golden cannot be surpassed for beauty, general appearance and conformation. Nothing so distinctly marked, formed and shaped in the way of a fowl as is this small Bantam. The Cochin and Brahma for weight—the Sebright for haughty carriage and diminutive beauty. This pretty little Bantam was originated by Sir John Sebright of England after experimenting several years. One of the most distinctive and remarkable characteristics of the Sebright Cock is the total absence of both hackle and sickle and saddle feathers—a minature hen in this respect and perfectly "hen-tailed" and all the feathers about the same length and square at the ends; combs mostly double or rose—Have seen just as finely marked ones, having single combs. Legs and feet blue. They

match in color the Golden and Silver Hamburgs, very finely pencilled and except that Hamburg cocks have the hackle, saddle and sickle feathers, both cock and hen marked more like the Hamburg hens. Have seen some Sebrights that more resembled spangled Hamburgs than penciled, but not so perfect. The color of legs correspond, as also do the combs. Have seen the most perfect Hamburgs in all respects have fine single combs—So do Sebrights, but rose-combs are the established comb peculiar to both breeds.

Bantams, Hamburgs and Polands are technically known as the "Feathered Fowls," because their peculiar merits consist in accuracy of the markings and beauty of the feathers, and not in their size. The Silver Laced are considered more beautiful to some fancier's eyes, but for my part I can make no choice and I esteem one as much as the other, if both are perfectly marked. Always if possible breed from old fowls—say two years—not chickens; your success will be far more certain. The chickens are hardy to excess, if kept in a perfectly dry place the first week or two; and it is quite necessary to enforce this, as the least damp at this early age is certainly fatal alike to your hopes and your chickens.

Any of the readers of this who have seen Sebrights can but say they are the very extreem, of self-esteem, vanity and self-assurance and impossible to conceive a more lovely ornament to a park or pleasure grounds, or one that claims more general admiration and astonishment from those who see him for the first time. The feet are raised in walking much more than in any others of the Bantams, and planted again with great deliberation and precision. When alarmed, their deportment is most striking; the wings droop to the ground not listlessly, but as if determined to make most of their tiny propotions, while the head is raised and thrown back, tail raised so that they all but meet.

The White Bantam with clean legs, is a samll beautiful creature; they are considered fancy and pretty when they have a beautiful, well developed rose comb and are superior in littleness to the booted variety. Legs should be clean and white and seldom weigh over twelve or fifteen ounces; they are not so common as the Booted; feather legged, White Bantam which we see every where. The White Bantam with feathered legs is very common and much larger than all other Bantams, but were at first, when no others were known, considered very pretty and were really much smaller than now. They are falcon-hocked, and feathered with long quill feathers to the extremity of the toe. The hens of this variety are excellent setters on small eggs and will seldom bring off and raise less chicks than the eggs given them. Also no ordinary layers.

I have had and seen some very beautiful Dominique-colored Bantams, from the well-known fancier Bement, which are worth any Bantam fancier attention, no larger than Sebrights—rose comb. How Mr. Bement originated them I am at a loss to know, but they are Bantam and very pretty little creatures.

There are beautiful and extreemly small Bantams that match Black Breasted Red Games, and a more pugnacious little rascal could hardly be conceived,—very noisy when disturbed and game to the death. Some are tall and slim single-comb, others lower legged, square and rose comb.

It is useless to go further in description of the Bantam family, for there are constantly new colors brought about, but I must not neglect to show some respect to those pretty Nankins which were among the first importations and have many admirers, and about the most useful of their race; their clear yellow and buff plumage and active figure, will procure and hold for them many fanciers' admirations. Good specimens of the cocks are decked in red, orange and scarlet, with a flashy appearance; the hen has some dark markings on the hackle and tail tipped with black; both sexes have short dark legs, and a double comb. Hens are excellent sitters and mothers. There is a brown variety, rather gray, some spotted with black, called Partridge Bantam; such are almost minatures of the Golden Hamburg and also resemble the Golden Laced, with characteristics of the Nankins.

Speaking now of Bantams in general, they are excellent layers of small delicate tasted eggs; good sitters and mothers and perform all

these duties with very little trouble. As mothers indeed, they appear to the greatest advantage; for their activity, courage and gentleness with their chickens, place them above all other fowls. Four or even five eggs per week each, during a laying season, extending over seven or eight months, is no unusual production.

HEN PHILOSOPHY.

IGNORAMUS.
Whether was the first, the egg or the hen?
Tell me, I pray you, ye learned men.

FIRST SCRIBE.
The hen was first, or whence the egg?
Give us no more of your doubts, I beg.

SECOND SCRIBE.
The egg was first, or whence the hen?
Tell me how it could come, and when.

IGNORAMUS.
A fig for your learning, 'tis fudge, I vow!
If you can't settle this question now;
So tell me, I pray you, ye learned men,
Whether was first, the egg or the hen?

BLACK TOOTH IN PIGS.—I have some fine pigs ten weeks old that are affected with a difficulty of breathing. On making an examination after the death of one of the pigs, a jet black tooth was found back of the tusk in the upper jaw. The tooth was hard to pull out but very easily broken off, nothing futher unusual was noticable. If you or any of your contributor can give me any information on this disease I for one will be much obliged.

C. D. M.

ANSWER.—This is a case of regular Black Tooth, which is much the same as Wolf-Tooth in horses and should be treated in the same manner, viz: take an iron punch—a long cut nail will answer—and with a light hammer, knock out the tooth side-wise. ED.

ANIMIAL GRAFTING.—A French paper some time ago, noticed certain curious experiments communicated to the Paris Academy of Sciences, by Dr. Bert concerning the possibility of grafting a part taken from a living body on another living subject. A rat's tail, for instance, introduced under the skin of another rat, would grow to is natural size, if not already full grown, in this new medium. In a second communication to the Academy Dr. Bert continues the subject, describing how this curious combination takes place.

The Dairyman's Department.

For the Ohio Farmer and Cultivator.

COWS AND DAIRY MATTERS.

I saw a question asked in a late number of the *Farmer*, by a Lorain boy, asking what was the best feed for milch cows in the spring, and have not yet seen and answer by any of the old farmers, who I would like to hear from. But my experience, as a young farmer is, the best feed is good hay, a mixture of timothy, red-top, and clover, fed three times a day; for the folloying reasons: If you feed bran or shorts it will make the butter so white that you can hardly sell it; if you feed corn that is ground, it is apt to make a cow's bag cake, as all cows are apt to be feverish after calving; besides feeding any kind of grain will make cows dainty, so that they will eat hardly any hay, which makes them look very poor, and I do not think that the quantity of milk is increased enough to pay for the grain and the trouble of feeding.

KICKING COWS.—I will now give the best mode of milking kicking cows, which is, to get a pair of fetters made to buckle around the hind legs. The fetters should be made with wo buckles in the middle about 1½ or 2 inches apart; one leg acts as a post to hold the other. Let every one who has got a bad temper, try a pair of these fetters, and he will find it much better than kicking a cow, and then swearing because she kicks you.

FOR COW POX.—Take sulphur and mix with lard, or Mecca oil [petroleum] is better if it can be got, and a few applications will cure the worst cases.

DAIRY ITEMS.—Cows are selling from $50 to $80 this spring; common cows about $60.—Butter is selling from 35 to 40 cts. Cheese, hardly any sold yet, a few from 15 to 17 cts. per pound. Deacon skins, $1 to $1 15; plenty of hay selling from $8 to $10.

SELLING MILK.—I would like to have some of the readers of the *Farmer* give their views on selling milk to the factories instead of having it made up for so much a pound, as I tried to learn something about it at the Cheese Convention, but that was the most one-sided affair I ever saw, for nearly every one there owned a factory or was a going to build one to make cheese by the pound. FAIR PLAY.

Aurora, April, 1866.

BUILDING CHEESE FACTORIES.

COST AND PROFITS OF MANUFACTURING CHEESE.

A correspondent in Onondaga county who has had but one year's experience in farming, says that his little experience has taught him there is but small profit in raising grain at present prices. He thinks more money can be made in dairying, and an effort is being made in his section to start a cheese factory. He wants to know if it will pay to run a factory with but three hundred cows, and if there is any difficulty in obtaining a first-class superintendent—whether responsible builders can be had in this vicinity, and whether building by contract is not the best way; also as to the price of making cheese, the quantity of milk for a pound of cheese, and what kind of cheese pays best.

As we are in receipt of several letters asking nearly the same information, we make a brief reply, which will answer for all. With good management, it will, perhaps, pay to start a factory with three hundred cows, especially if there be a prospect of obtaining a greater number, the second year, but with no such prospect it is a pretty close business. Supposing the cows average four hundred and fifty pounds of cheese each, we have in the aggregate 135,000 pounds of cheese, on which, if one cent and a half per pound be charged for manufacture, there will be $2,025 as the receipts.

A good factory, put up in running order will cost at least in these times say $4,000. Fifteen per cent. on investment will no more than pay back interest and keep things in repair. This would leave $1,425 for expenses in running the factory, labor, &c. We suppose a first-rate Superintendent cannot be had for less than $500 or $600 per season, and many get more. So it will be seen that no very large profts can be made on putting up a factory with this number of cows, even if the high price of 1½c. per pound be charged for manufacturing. If we were to erect a factory, we we should prefer to have it built by contract. There are builders who have made a business for some years past of erecting factories, and it will be better to employ such, as they understand just what is needed, and will suggest many conveniences which carpenters not familiar with the business would not do. We presume competent men can be employed, either in this county or in Herkimer, to erect factories.

As to the scale of prices this year for making cheese we are not informed. The old price was one cent per pound. Last year prices were higher and run up to 1½c. and in some instances higher rates. At some factories two cents were paid, which included boxing and bandages, salt and all expense for fitting cheese for market. The price for manufacturing varies at different factories. It depends upon the number of cows, and other circumstances. The quantity of milk for a pound of cheese varies according to the quality of milk, and skill in manufacturing. In estimating, the average is usually 10 pounds of milk for one of cheese. Some factories report a pound of cheese from 9¼ of milk, and some even less. The kind of cheese that pays best is that which is firm, of good texture, fine flavor, and weighing from forty to sixty pounds. One can hardly tell just now what style of cheese will pay best, as we do not know what is to be the condition of the home markets.

We should advise persons contemplating building factories in new districts to look through factories of Oneida and Herkimer and other counties, where the system is in operation, since the various workings of the system will be better understood than can be explained on paper.—*Utica Herald.*

NOTE—To the above, which was written by Mr. WILLARD for the region of Central New York, we add that the facts and figures apply equally well to the dairy region of North Eastern Ohio, and persons in search of ocular demonstration, should visit the cheese factories of Geauga or neighboring counties where the business is successfully carried on. ED.

SAVING RENNET CURD.

In reply to the inquiry whether the flavor of cheese was not injured by using the curd with the rennet, a correspondent of the *Utica Herald* thinks his was not. We never save the curd with the rennet unless it is *curd*, and entirely clean. If there is any appearance of a change in the contents of the stomach they are thrown away, and I believe the skin itself is not as good from the time decomposition of the curd commences, until the stomach is empty. If we are to use only the skin of the rennet for coagulating milk, it would be best, in my opinion, to kill the calf just before the usual feeding time, with an empty stomach. But if the calf is allowed to take its morning meal and then killed during the third or fourth hour thereafter, the curd will be found in condition.

CHEESE MAKING.

The last box of old cheese of last season's make was forwarded to market during the past week. Jas. H. Clark's factory cheese of Herk. Co., sold in New York at 25c a lb. for the Charleston market, 13 inch, weighing 45 lbs our best dairymen soaked their rennets in whey in stone jars during spring and fall. In summer it is rather dangerous to use whey. In March and April cheese, salt light, 2½ lbs. salt 100 lbs. cheese: May cheese 3 lbs. and June July and August, 3½ lbs. per hundred. Handle the curd carefully and as little as possible.—The lactic acid fermentation hardens the curd. It is not working or cooking, but souring, that renders the curd firm. Coagulation is but another word for cohesion. This cohesion of the particles of curd is strictly chemical, brought about by the opposite electrics, with certain conditions of heat, and as curd or caseine is a non-conductor of heat, it becomes necessary to move the curd just enough to distribute the heat evenly,—that is all. The force or power of cohesion quietly and slowly taking place is greater than the power of any known mechanical force. If curd could be kept at the temperature of the milk when the rennet is applied, and not suffered to cool, there would be no necessity of cutting or working at all, but when the curd is sufficiently sour, dip the whole into the draining vat and salt; salt arrests the acid fermentation, and is an antiseptic; it only prevents the putrefactive fermentation. Cheese is not salted to flavor it, (the more salt the sweeter the cheese) but simply to preserve it from taint or decay. ONEIDA CO., N. Y.

Boston Cultivator.

CUTTING CHEESE.

One of the objections against large sized cheeses is that there is a waste in cutting on the counter. In taking out a few pounds after the usual manner of cutting, each piece has a sharp angle. A portion of this will break into crumbs, and the whole sharp angle is not of the right shape to be cut up so as to make a nice appearance for the table. This defect has always been noticed by consumers, and especially by retailers, who cut and sell small quantities of cheese to customers. It is very apparent when it is attempted to cut a few pounds from a large cheese, you then have a long, thin wedge, the greater portion of which is liable to be broken up into crumbs before it reaches the home of the purchaser, and of course is not in desirable condition for the table. In England, this is a serious objection to large cheeses, and hence the demand for those of a smaller size, that may be quartered, and then subdivided in an opposite direction, as was shown in cutting the little Cheddar at the recent cheese convention in this city.

Mr. H. Farrington of Canada, suggests a method of cutting cheese on the counter to obviate this difficulty, and which he has practiced the past season with entire success. It is ver simple and may be of advantage to retail dealers and consumers to have adopted.

The plan consists in cutting into the cheese half way to the centre, then at this point running the knife in an opposite direction partly across the cheese, and then cutting from this point to the outside, taking out about an eighth of the outer portion of the cheese. You thus have a block of cheese, free from the objectionable angle, which may be subdivided as required. The same rule is to be observed in taking out the other sections, and when the whole outer portion has been removed, there is left the centre piece in an octagon shape, which can also be cut into pieces without loss. The suggestion is practical, and if adopted by grocers, will give good satisfaction to customers.—*Utica Herald.*

GARGET.—The *Prairie Farmer* recommends for this trouble of milch cows, one part aqua ammonia, two part sweet oil mixed and rubbed in daily. The *New England Farmer* gives Mr. Flint's specific, which consists of iodine ointment, prepared by taking one drachm of hydriodate of potash and an ounce of lard well mixed together. A portion of the mixture from the size of a pigeon egg to twice that amount, to be well rubbed into the swollen part morning and night. It says: "Or the hydriodate of potash may be administered internally. Put an ounce and a half of 660 grains into a bottle and add fifty-five table spoonful of cold water. Shake briskly and and it will be thoroughly dissolved in a few minutes. One table spoonful will contain a dose of 12 grains of the hydriodate, which may be administered with a little wet Indian meal or shorts well-mixed.—Give two or three doses a day. Keep the bottle corked tight."

The heavens are as deep as our aspirations are high.

For the Ohio Farmer and Cultivator.

SPRING TIME.

At last the chilling breath of winter seems to have withdrawn its sway, and the warm south wind woos us forth from the winter haunts to bask in the early April sunshine, to listen to the birds as they carol sweetly, heralding the joys of coming spring. Beautiful, bright-plumed birds, their varied hues suggest thoughts of the longed for, coming flowers.

But a few days ago as we walked through the meadows—

> "We minded that the sharpest ear,
> The buried brooklet could not hear,
> The music of whose liquid lip,
> Had been to us companionship."

Now the icy chains have disappeared with the March winds, and onward it babbles, sparkling with joy at its spring-born freedom, stopping only on its winding way to greet the shining pebbles with a welcome kiss. Here and there, peering up from beneath the brown and grey matting which covers the earth, like emeralds from a dark background, are tufts of grass; the tender blades are lifted up half timidly as if to gather from the whispering breeze if it be true that Old Boreas has yielded his sceptre to the more genial Austral winds, and that—

> "The chill embargo of the snow
> Was melted in the genial glow."

While sitting by the open casement, half dreaming, the sun has gone down, the mellow golden twilight disappeared, and the moon, pale queen of night, robéd in silvery sheen, attended by the daughters of her court, the brilliant stars, in more than regal splendor, bedeck the vast blue field above. From dreamland the soul is recalled by the humming of waters, commingled with the wierd-like music of the croakers from the distant ponds. One might fancy that these plaintive notes were offered up as a funereal requiem to the so recently departed frosts and snows. Soon the flowers of April will have strewn the grave of winter with their beauty and fragrance, and the mantle of forgetfulness will have enshrouded its chilling tomb.

April, capricious April, half smiling, half weeping, who does not enjoy alike its smiles and tears? In the words of a favorite author, it is delightful to "search out the sunny slopes by a southern wall, where the reflected sun does double duty to the earth, and where the frail anemone, or the faint blush of the arbutus, in the midst of the bleak March atmosphere, will touch your heart like a hope of heaven in a field of graves! Later come those soft, smoky days when the patches of winter grain show green under the shelter of leafless woods, and the last snow drifts, reduced to shrunken skeletons of ice, lie upon the slopes of northern hills, leaking away their life. Then, the grass at your door grows into the color of the sprouting grain, and the buds upon the lilac swell and burst. The peaches bloom upon the wall, and the plums wear a bodice of white. The sparkling oriole picks strings for his hammock on the sycamore, and the sparrows twitter in pairs. The old elms throw down their dingy flowers, and color their spray with green; and the brooks where you throw your worm or the minnow, float down whole fleets of the crimson blossoms of the maple. Finally the oaks step into the open quadrille of spring, with greyish tufts of a modest verdure, which by and by will be long and glossy leaves. The dog-wood pitches his broad, white tent on the edge of the forest; the dandelions lie along the hillocks like stars in a sky of green; and the wild cherry, growing in all the hedgerows, without other culture than God's, lifts to Him thankfully its tremulous white fingers.

Amid all this come the rich spring rains.—The clouds hover on April sky, like shadows upon innocence." Dreamily yours,

On the Farm, April. MARY DAY.

CONCERNING DOORS.—When you go into a neighbor's premises, be sure to leave the doors as you find them. If you find a door shut, you may reasonably suppose that your friend wanted it shut, and therefore you have no right to leave it open; and if you find it open, no matter how cold the weather is, do you leave it open, for it is reasonable to suppose that it was left open for some good purpose. And the same is good for all places, whether they be houses, stores, factories, offices, or whatever they may be. Remember the rule—it has no exception; leave the doors as you find them.—If the owner of a door does not know how he wants it, how do you know how he wants it?

For the Ohio Farmer and Cultivator.

GETTING UP FROM SICKNESS.

BY JOSEPHINE C. BATEHAM.

Convalescence, what a word of hope and cheer! The heart is filled with gratitude for increasing health and strength, and with fond anticipations of perfect recovery. Relieved from the intensity of suffering, there is time for thought. Unoppressed with the cares and labors of health, there is opportunity for one of the most important works of life—a critical review of the past, a forming of new plans and resolutions for the future. Now too is the time to test the value of all the beautiful passages of prose and poetry, and the texts of Scripture that have been memorized. How pleasantly they serve to cheer the weary hours. Who would not thus be well prepared for the time of loneliness and trial?

Do not seek to hurry into health too rapidly, or nature will rebel, and force you into a relapse. The period of convalescence is one of great value; be not impatient with it, but be quiet and easy, enjoying the present. Blessed season—it is like the daybreak of a new life—the feeble tottering step, the growing strength of limb and nerve, the weakness of mind, too, so easily pleased with trifles, how like childhood! Let the growth be as valuable and as enduring as that of childhood, and haste is of little account.

Be cautious about exposure—not by heating the room till a breath of air will give you cold, or by closing the doors and windows tightly; for good ventilation is all important in a sick room, and if accustomed to it, an abundance of fresh air will not hurt, but invigorate and do you great good. There is danger, too, of *over* caution about exercise, food, etc. What we mean, is, think and take care for yourself; do not leave all this to others, but study your own constitution carefully, and watch your own health instincts.

We believe nature often points out its own wants, when we fail to listen to its promptings, and follow the old beaten track, to our own great injury. Yet we must be cautious, lest we take caprice for health instinct. The *judgment* must be exercised about what is suitable, and yet there is need that we should *individualize* more in our prescriptions. We all know that there are peculiarities of constitution in almost every one, which will accept many things which are ordinarily hurtful, and reject others which are commonly beneficial.

If nature seems to crave any particular food, drink, exercise or amusement, we should *try it*, using caution as to quantity. We all know, for instance, that until lately, cool water was denied to those suffering from fever, yet nature unceasingly craved it, and when it was by stealth obtained, the patient recruited, till at last physicians concluded that nature knew best.

So with sick children. They often, though not always, best understand their own needs, and if they shuddered at a cold bath, we should warm it, if they crave food, we should say, give it, being careful to select that which is light and wholesome; if they need exercise, let father's stout arms carry them. How often the little things suffer from want of this or from want of a cool bath, and nurses lose their patience with the poor sufferers, instead of ascertaining and supplying their wants, and soothing them, making allowance for a fretful convalescence.

For the Ohio Farmer and Cultivator.

MUSIC.

Music is one of the most pleasant and cheering sciences, and the most popular of all accomplishments. Vocal music can be eisily attained, but instrumental is more complex and expensive. "I have a piano within myself" said a little girl, "and I can play on that if I have no other." Every one should have some respect for this beautiful science. Instrumental music soould not be studied unless there is a natural taste for it, because it is unreasonable to sacrifice so much time in practicing if the performer does not take any delight in its sweet sounds. Music is not confined to persons only. Most inferior animals love it and there is music in the songs of birds, insects and also in inanimate things, as the wind, the rain, bells, &c.

There are pleasures in remembering the songs of early days; aged persons will often think, and speak of the songs of their youth. They bring fresh into their memories hours long since departed, and make them almost feel as if they were young again.

Music has good and mysterious effects upon the mind; it calms the troubled and bereaved, and cheers the soul of the dejected. Without this lovely science the world would be devoid of half its charms. Since it is so lovely and important, why does it not claim a larger share of attention and cultivation?

Farmer's Little Wife.

MODERN IDEA ABOUT HOSPITALITY.

The poetry of the world is fast dying out. Love means a good bargain. Devotion means going to church in the morning on comfortable Sundays, and hospitality—well we are forgetting what that does mean. It is a tradition, the rounding period of our grandmother's epitaphs.

I am a maiden lady, a little ancient, yet not old. I teach all the year around, except in vacations. Last winter a married schoolmate living in N——wrote me a pressing invitation to visit her. "Come any time," she said. "We are always delighted to see you; only be sure and come, dear M." I am not credulous in the matter of invitation, having certain horrible examples of imposition before my eyes; but this one I really thought I must accept.

The summer vacation came, and a bright June day brought me to the home of my friend. I spied her as I came near the house drawing her baby in the yard, looking very fresh and pretty in her bright pink dress. I hurried a little, all ready for a warm embrace. Lo! the tips of her fingers, a tiny kiss on one cheek and, "I am very happy to see you," in tones that means to sensitive ears, "I will be polite but I wish you were in Joppa." My heart sank, but there was no help. Into the house I must go and here I must stay ten mortal days. The invitation mood had passed off.

I resolved to make myself useful, and began vigorously embroidering of baby hoods, and crocheting of baby sacks; but I soon made the pleasing discovery that all this was calculated upon beforehand. These were things that visitors would be likely to do! I did think in time to refrain from adding to the washing, and expressed the utmost indifference to certain rides and excursions which were proposed in evident hope that I shouldn't wish to go. The price of provision was discussed at the table in a way that made me afraid to take a second cup of tea or peice of cake, though the basket was always passed with the gingerbread side toward me.

The ten days came to an end. I packed my trunk with a lighter heart then I had felt since I unpacked it, stretched my conscience wofully to say what a pleasant time I had had, and sped away with unutterable reflections. After riding five or six hours in cars and stage, the reflections were somewhat dulled by a decided sensation of faintness; for you must know the custom of putting up luncheon for departing guests is quite absolete. No matter if you are well aware they will have no chance to get even coffee and cake before night. Ask them no questions bid them good-bye with a smiling face. Urge them to come again very soon, and say: "This has been only a call; we want a long visit next time." Then shut the door and give a sigh of relief that it is over at last.

There are myths about sharing the last crust with a friend. There was certainly something in the geography about savage tribes who reverenced even a mortal foe under the title of guest. Alas for the romantic faith of childhood. They had probably reckoned the value of the venison steak they had eaten, after they had gone. Don't be too indignant on the general subject. You know very well you didn't dare ask your old friend, George White, home to dine with you yesterday, though you hadn't seen him before in a dozen years. You didn't like to risk the storm with madam. It wasn't her plan to have company to dinner that day. She's a very systemactic housekeeper. I told you I was an old maid's but I did once have brothers and sisters and a home, like other people; so I'm not so unpractical as you think.

I know the hidden mysteries of housekeeping—the biscuit made in a hurry for unexpected company, the tirade from Bridget, who "won't stir a step to carry wather up stairs afther do'in all this day's ironin'." I know the hurry to finish sewing before the arrival of guests and the hurry after they had gone to make up the lost time; but to grudge all this effort was not the custom when I was young. To tell you the truth I think it was the religion in our little home that made it so easy to entertain guests in season and out of season. The mother's cheerful self-forgetfulness only emphasized the father's serious voice reading at prayers. "Use hospitality without grudging." It rarely occurred to us to think of the trouble of company. If we did we were soon ashamed of it, and as for the visits of real friends they were the great delight of the year. How unsophisticated—how old-fashioned we were?

Gail Hamilton has a sensible chapter in "A new Atmosphere," on public meetings, anniversaries, etc., where the heavy burden of entertaining falls on already overtasked housekeepers. Sensible as it was, we recollect a little in reading it because it seems to us the tide sets quite too strongly that way already. We know

well the headaches and various miseries that result from the unusual sweeping and dusting and cooking and smiling on these anniversary occasions. We know, too, the parting look of gratitude, the warm pressure of the hand, the tearful eye that somehow strangely reminded one of distant music, "Inasmuch as ye have done it unto one of the least of these, ye have done it unto me.

After all, it is a fancy of ours that we don't live to have just as easy a time as possible, and that generous hospitality needn't be confined to the rich. It reflects no great honor on our common nature, if the struggle to make small means meet higher prices must blunt our affection, cool all our ardor, and change the genial, graceful courtesy of hearty friendship into a mere calculation of trouble and expense. No matter on what "homely fare we dine," or how often the "hodden gray" has to be made over, do let us welcome our friends with simple old time sincerity to share it just as it is. If we can't have all the new magazines on the table, or many pictures on the walls, we can be so truly affectionate, so thoughtful of our sister's comfort, so thoroughly hospitable, in the true sense of the word, that there will always be in their memories a halo round our plain, quiet home. If we can have all these comforts for ourselves, it argues a miserable indolent selfishness not to rejoice in sharing them with our friend. We want another Mrs. Opie to write a new chapter on "White Lies"—the lies of invention—a new apostle to preach on the beauty of ministering.

AMERICAN VELVET.

The machinery for the manufacture of velvet in use by the American Velvet Company, was introduced into this country by them under the superintendence of the inventor himself, Mr. Holt, of Cheshire, England, who has the entire charge of the establishment. It has been patented in England, France, and the United States. The superiority, in the matter of rapidity, of the manufacture by this machinery over the old method is as great as that of the modern railroads for purposes of locomotion over the old stage-coach system, or of the sewing machine of to-day over the ordinary mode of needlework. The old method is as follows:

Grooved brass rods or wires were placed under the web which forms the pile, secured by threads woven into the warp. The weaver cuts the threads by means of a knife, held in the hand, the blade of which slides along the groove, dividing the pile into two rows of threads, thus giving a nap or pile of the depth of the rod inserted.

The manufacture, according to the patented method is accomplished by weaving two warps or foundations, with a middle warp alternately rising into the upper and lower, being secured by two shuttles moving at once. The knife moves horizontally, in the same direction as the shuttles, and the two warps and the pile between are divided, and the naps are cut into equal lengths.

Two piled fabrics—the exact counterparts of each other—are thus made at one time.—The shuttles and knives are all impelled by the ordinary motions of the power loom. The statement that 110 picks or threads are made in a minute (or nearly two every second) will give some idea of the rapidity of the manufacture.

A man with the patented machine can make from 50 to 60 yards per week, while 8 or 10 yards would be a good week's work for the same person should he make use of the ordinary hand-loom. The saving of labor by this process over the wire-weaving method is estimated at from fifty to seventy per cent, while the fabrics are equal, and in some respects superior to those of foreign make.

These looms were invented and imported for the especial purpose of manufacturing plush for gentlemen's silk hats, and in this article the company claim that their workmanship cannot be equalled. American hat manufacturers, with but few exceptions have abandoned the practice of sending their orders abroad for this material, and purchase their plush from the American Company. The looms, however, are adapted to the manufacture of all kinds of piled fabrics, since an article of this nature for gentlemen's caps has become very popular as a substitute for fur. Tartan or clan velvets are also made.—*Newark Sentinel.*

A gentleman one evening was seated near a lovely woman, when the company around were proposing conundrums to each other. Turning to his companion, he said, "Why is a lady unlike a mirror?" She "gave it up." "Because," said the rude fellow, "a mirror reflects without speaking; a lady speaks without reflecting."—"Very good," said she. "Now answer me. Why is a man unlike a mirror?" "I cannot tell you." "Because the mirror is polished, and the man is not."

For the Ohio Farmer and Cultivator.

SPRING OF PEACE.

O North-wind! sleep on your icy heath,
For a maiden comes up from the south,
With her bright hair bound with a budding wreath,
And a smile on her mouth.

Frighten her not from the yearning land,
And even the ways of death
Will bloom at the touch of her olive wand,
And the dew in her breath.

She has kissed the grave where the hero lies,
By the river and by the sea,
And I read, in the light of her tear-washed eyes,
That the land is free.

And the holy flowers will bloom o'er the slain,
Nor tell of the fearful price,
Nor wear a trace of the battle stain,
Or the sacrifice.

Already the soil of the crimson plain
Is turned by the peaceful plow;
And the *freeman* waits for the early rain
And the harvest now.

And the busy spade is brighter far
Than ever a sword that gleamed—
We have passed through the deep red sea of war
To a land redeemed.

Then North-wind sleep on your icy heath,
For a maiden comes up from the south
With her bright hair bound with a budding wreath,
And a smile on her mouth.

FEE FORWARD.

For the Ohio Farmer and Cultivator.

LIVING.

A tiny leaf with might and main
Swung in the sunshine and the rain;
Swung thro' the day and thro' the night,
And sung with all its little might,
"I'm living."

A brook down thro' the meadow strayed,
Scarce deeper than the footprints made
By tiny things that stooped to drink,
And heard, while wondering, at its brink,
"I'm living."

A star hung o'er the deep, mild sea,
Trembling with life's infinity
Of joy, while lying far beneath
The sea heard with suspended breath,
"I'm living."

Mighty and loud with clanging sound,
Or in low voices stealing round,
The elements, the earth and sky
Their signet hosts combine, and cry,
"I'm living."

Man walks the earth and breathes the air,
And sends to heaven his frequent prayer;
And thinketh not what gift is his,
Or what abundant joy there is
In living.

C. M. S.

WOMAN'S WORK.

No true-hearted woman can find herself in real, actual life, unskilled and and unfit to minister to the wants and sorrows of those dearest to her, without a secret sense of degradation. The feeling of uselessness is an extremely unpleasant one. Tom Hood, in a very humorous paper describes a most accomplished school mistress, a teacher of all the arts and crafts which are supposed to make up a fine gentlewoman, who is stranded in a rude German inn, with her father writhing in the anguish of a severe attack of gastric inflammation. The helpless lady gazes on her suffering parent, longing to help him, and thinking over all her various little store of accomplishments, not one of which bears the remotest relation to the case. She could knit him a bead purse, or make him a guard chain, or work him a footstool, or festoon him with cut tissue paper, or sketch his likeness, or crust him over with alum crystals, or stick him over with little rosettes of red and white wafers; but none of these being applicable to his present case, she sits gazing in resigned imbecility, till finally she desperately resolves to improvise him some gruel, and, after a laborious turn in the kitchen—after burning her dress and blacking her fingers—succeeds only in bringing him a bowl of *paste!*

Not unlike this might be the feeling of many an elegant and accomplished woman, whose education has taught and practised her in everything that woman ought to know, except those identical ones which fit her for the care of a home, for the comforts of a sick room; and I say again, whatever a woman may be in the way of beauty and elegance, she must have the strength and skill of a practical worker, or she is nothing. She is not simply to be beautiful, and preserve it; and she who makes and she who keeps the beautiful must be able to work. Whatever offices of life are performed by women of culture and refinement are thenceforth elevated; they cease to be mere servile tools, and become expressions of the ideas of superior beings. If a true lady makes even a plate of toast, in arranging a *petit souper* for her invalid friend, she does it as a lady should. She does not deluge it with bad butter, and serve it cold; but she arranges and serves all with an artistic care, with a nicety and delicacy, which make it worth one's while to have a lady friend in sickness.—*Mrs. Stowe in Atlantic Monthly.*

The Housekeeper's Department.

For the Ohio Farmer and Cultivator.

TWO-STORY CUSTARD PIE.

I must tell you about a new style of custard pie which we are making at our house. Maybe it is not new to some folks, but it is such a good pie that I thought everybody ought to know about it, in these spring days when "pie timber" is scarce, except what the hens give us. This is the way we make it:

Separate the yolks of the eggs from the whites and make the pie with the yolks in the usual way, in deep pie plates, so as to leave room on top of the pie within the rim of the crust for the second story. Bake this pie till very nearly done; have ready the whites of the eggs, well beat up like float, and seasoned to the taste; take out the pies and pour over the tops a good coat of this float; then set them back in the oven long enough to cook this upper story so the top will be delicately browned, and the whole is ready for the table, making a dessert which will meet the approbation of any person who likes custard in any form. A lemon flavor is generally the best for these custard pies.

Hazel Dell. SUN BONNET.

For the Ohio Farmer and Cultivator.

A KITCHEN ITEM.

I had been thinking some time, hardly daring to give expression to my thoughts, lest some one should ejaculate, "Elevating I must say!" but at last I ventured to articulate faintly: "Girls, I am going to write on the subject of —of—of dish-washing and —raga." Was'nt there, as I listened intently, a whispered giggle, side-long glance and a curl of the nose? No, there was'nt any such thing, but the oldest and most sensible replied very quietly, "There is need enough of it." I was encouraged. The stupendousness of the task forces itself upon my mind, and the question is—what can I say that will create an impression?

First, dish-washing is considered a degrading employment by most ladies with white fingers, and it is not strange when we catch a glimpse of the manner in which the operation is conducted. They, with ourself, have before them in imagination, the dingy kitchen, the suspicious looking receptacle in which the dishes are supposed to be cleansed, the dun-brown stove, and last of all, the array of ragged-edged pieces of cotton, (brown) on a line back of it. These last form the subject of our discourse on this occasion, generally only fit to be seen in the rough red hands of some care-for-nobody servant girl. This is one of the prominent causes which lead every young girl to keep shy of the kitchen and its duties, for how chagrined would she be if upon some unlucky occasion *the* young man should chance to catch her with the aforementioned brown article in her hand. She has need to fear that it would dislocate his angelic ideas of her etheriality, and bring her down to the humdrum sphere in a very short period of time. In this manner young husbands are disappointed and surprised often upon discovering that the beings whom they thought the patterns of neatness and refinement, can tolerate such dingy surroundings, and even such a trifling thing as this has power to make a fine spirited man "sigh but say nothing."

But one says, "you don't expect we can keep a *white* dish-rag?" There's the question, plain and not to be misunderstood. "Yes, we say you can," and there's not a prettier sight than a young, rosy cheeked housekeeper, in the kitchen, the floor clean, the stove blacked, and on the line back of it, an array of pieces of white cotton, instead of the brown, so alarmingly prevalent. The "young man" will then come in, pleased instead of disappointed, and will be proud to show his house-keeper to even his college chum.

If neatness could be better observed in the little necessary departments of life, there would not be so much fear of being seen in the kitchen by our intelligent and intellectual American ladies. It would be strange now to hear of a Governer's or President's wife having a hand in preparing the festal entertainment, and yet ESTHER, the Beautiful Queen of the great AHASUERUS, hestitated not to say to the king and HAMAN, "come to the banquet which *I* have prepared," though we do not suppose she was ever employed in menial services, yet her invitation plainly shows that in the olden times, times proud and luxurious as the present, labor was not considered the degrading thing it now is by the mistaken people of our time.

We are aware our theme has been subject to some disgression, but we trust the end will justify the means, and would be delighted if we could say anything which would bring about a moral reform in so necessary a department of eating and drinking as the kitchen and its utensils, and the *modus operandii* of persons who have the charge of it. C. M. S.

HOW TO SAVE YOUR TEETH.

Our teeth decay. Hence bad breath unseeming mouths, imperfect mastication. Everybody regrets it. What is the cause? It is a want of cleanliness. A clean tooth never decays. The mouth is a warm place—ninety-eight degrees. Particles of meat between the teeth decompose. Gums and teeth must suffer. Cleanliness will preserve the teeth to an old age. Use a quill pick, and rinse the mouth after eating; brush and castile soap every morning; the brush with pure water on retiring. Bestow this trifling care upon your precious teeth, you will keep them and ruin the dentists. Neglect it and you will be sorry all your lives. Children forget. Watch them. The first teeth determine the character of the second set. Give them equal care. Sugar, acids, hot-drinks, saleratus, are nothing compared with food decomposing between the teeth. Mercury may loosen the teeth, use may wear them out, but keep them clean and they will never decay.—[*Henry Ward Beecher.*

WHY LAMP CHIMNEYS BREAK.

One of the most fruitful sources of annoyance to house-keepers, in these days of petroleum, when lamps have entirely superseded tallow "moulds" is the breaking of lamp chimneys. These accidents, if accidents they are, occur so frequently that the cost of keeping a supply on hand foots up a very considerable item in household expenses. Few persons know the reason of this breakage, and while some attribute it to carelessness on the part of domestics or members of the family, not a few blame the manufacturers. An article published in one of the English Magazines on the fracture of polished glass surface, gives some information on the subject, which may be of advantage to our readers. The writer says: "It is a fact known to the philosophical instrument makers that if a metal wire be drawn through a glass tube, a few hours afterwards the tube will burst into fragments. The annealed glass tubes used for the water guages of steam boilers are sometimes destroyed in this way, after the act of forcing a piece of cotton waste through them with a wire for the purpose of cleaning the bore. This will not happen if a peice of soft wood is employed. The late Andrew Ross informed me that on one occasion, late in the evening, he lightly pushed a piece of cotton wool through a number of barometer tubes with a piece of cane, for the purpose of clearing out any particles of dust. The next morning he found most of the tubes broken up into small fragments, the hard silicious coating of the cane proving as destructive as he had previously known a wire to be. Persons who have been in the habit of using wires, table forks, and a lot of metalic articles in the washing of these chimneys, will in the above stated fact, find the reason of their chimneys so often snapping to pieces on the lamp.—*Ex.*

TASTE IN WALL PAPER.

The choice of wall paper should be guided in every respect by the destination of the room in which it will be used. The most important question will always be whether it is to form a decoration in itself, or whether it is to become a mere background for pictures. In the latter case, the paper can hardly be too subdued in tone. Very light drab, green (not emerald,) and the silver gray can be found suitable for this purpose, and two shade of the same color are all sufficient for one paper. In drawing-rooms, embossed white or cream color, with a very small diaper or spot of gold, will not be amiss, where water color drawings are hung.

As a rule, the simplest patterns are the best for every situation; but where the eye has to rest upon the surface of the wall alone, a greater play of line in the patterns may become advisable. It is obvious that delicate tints admit of more linear complexity than those which are rich or dark. Intricate forms should be accompanied by quiet color, and a variety of hue should be chastened by the plainest possible outlines. In color, wall paper should oppose, instead of repeating that of the furniture and hangings by which it is surrounded. Some people conceive that the most important condition of good taste has been fulfilled if every bit of damask in one room is from the same piece, and every article of furniture is made of the same wood. At this rate the art of house fitting would be reduced to a very simple process. The real secret of success in decorative color is, however, quite as much dependent on contrast as on similarity of tint, nor can real artistic effect be expected without the employment of both.—*Ex.*

We make conquest only of husks and shells for the most part—at least apparently—but sometimes these are cinnamon and spices.

The Agricultural Department.

For the Ohio Farmer and Cultivator.

MATERIAL STANDING OF OHIO.

Live Stock.—In 1862 and 1865 the State Auditor's report shows the following decrease in numbers: In horses and mules, 47,765; in cattle, 626,476; and in hogs 1,310,211; and increase in sheep 1,857,565. Estimating our loss on 1,310,211 fat hogs at $25 each, prices sold for in 1863, '64 and '65, gives $32,755,275 ; and the gain on 1,857,565 sheep at $5 each is $9,287,845, shewing a net loss on hogs over net gain on sheep of $23,467,430 in four years. Sheep taxed in 1865, 6,305,796; average value for taxation $3,60 per head.—Sheep in Marion county were taxed at $470; in Delaware at $4,60; in Madison at $4,43; in Belmont, $4,41; Jefferson, $4,32: in Licking, $4,20; these counties were rated highest, Marion above all others, being 33 per cent above the State average.

Wool.—6,305,796 fleeces at the low average of 3¾ pounds, gives a total of 23,646,735 pounds, and at 65 cents $15,370,735 for our wool clip of 1865.

Corn.—Our crop was estimated by the Agricultural Department at Washington at 94,119,644 bushels for Ohio. Votes cast for Govenor, Cox, 238,633; Morgan, 193,697; total, 417,330. From the above official data it is seen that for every vote cast in our State, there are 15 head of sheep, 56¼ lbs of wool, and 225 bushels corn; and taking into view the productions of little Marion county and her 3,117 voters, we have 37 sheep, 140 lbs wool, and over 400 bushels of corn for each voter.

Our Wealth.—Our State valuation of property taxation in 1865 is $1,069,605,855, this exclusive of banking capital and government securities held by our citizens and institutions not taxable, amounting to millions.

Our present and most urgent necessity is increased labor, physical, mechanical and intellectual labor. We ask our general government to give the necessary stimulus to these by laying specific and adequate duties on all importations coming in contact with, and detrimental to the full development of our home labor. These rightly directed to the productions of our soil, mines, mechanics, workshops and manufactories, will in a very few years entirely wipe out our great national debt, and produce an amount of solid wealth (not paper) heretofore ever witnessed by our American people.

The aims and heart's desire of our loyal population are, I truly believe, the prosperity of our whole country, and the good of its posterity. Born in 1793, I have a good recollection and shared in the times, scenes, and difficulties and circumstances in connection with the war of 1812-15; as also its effects, witnessed and suffered in closing the same in 1815-18; the two latter years the hardest, and property, real and personal, depressed less than *one-fourth its value* before or since. We have a much brighter prospect before us now than was experienced fifty years since, and with harmony in council and the blessings of God, we have as a country nought to fear.

A Marion County Farmer.

CULTIVATION OF FLAX.

BY WM. NEWCOMB, RENSSELAER CO. N. Y.

Soil and Situation.—The first requisite in Flax Growing is to have a good soil, in a suitable situation. On the alluvial soil on the banks of the rivers or smaller streams, Flax will not succeed. Mildew or rust almost invariably destroys both the seed and stem, or hurl. All high or elevated lands that will produce good corn, if not sands, will produce good Flax with proper cultivation. Flax does not succeed well on a sward ley, but ought to be sown after some hoed crop of the previous year. It does not bear manuring with barn-yard manure the season it is sown. The seed must be good and free from foul seeds.

Preparing the Land and Sowing.—The land can scarcely be too finely pulverized before sowing. If plowed when wet no after cultivation can remedy the evil. The earlier the land can be plowed, after it is in a suitable condition, the better prospect of a good crop. Drag or harrow the ground thoroughly before the seed is sown, and as lightly as possible, and only once after it is sown. The heaviest crop I ever raised was in a sixteen acre lot, which was not dragged at all after it was sown, but washed in by a heavy shower and continous rains for several days until the seed had sprouted.

There are several rules as regards the time of sowing Flax seed. One of them is, when the forest trees begins to put forth their young leaves. Another is, the first week in May.

But the safest rule is when your soil is in good condition to work, and the danger from severe frosts has passed. After the flax is up and has two well formed leaves there is no danger from frost in this stage of the plant. I have known Flax injured by frost when first coming out of the ground.

Amount of Seed—Fertilizers.—One bushel of seed to the acre is fully sufficient if the object is to obtain seed and lint united—a less quantity if for seed alone, and perhaps a little larger quantity of seed if the lint only be desired. The seed is usually sown by hand, and ought to be scattered evenly over the ground. Machine sowing I have never tried, but have no doubt it could be profitably done. Any method will answer in sowing the seed if it be done in such a manner as to get it evenly on the ground.

The labor of getting in a crop of Flax is about the same as getting in a crop of oats I have found great benefit resulting to the crop by using the following as a fertilizer:—One bushel Fine Salt, per acre—mixed and sown on the Flax as soon as it is out of the ground. This stimulates the growth, adds to the strength of the stem, and increases the quality and quantity of the seed. It is assumed that the land is free of weeds, or nearly so, as they always lessen every crop, and especially the Flax crop.—*Manual of Flax Culture.*

TEXTURE OF SOILS.

The quality of soils is very various, particularly as to texture and consistency, and no quality has more influence upon the well-being of plants than this. All the operations of spading, digging, plowing, trenching and draining have for their object the production and perservation of that condition which will allow all excess of water to pass freely away, and admit as freely fresh supplies of atmospheric air. While humidity is necessary, and too loose a texture makes too dry a soil, excess of moisture is a great evil, and must be corrected by whatever means are applicable. When the soil is saturated with water the access of the genial air and its gaseous properties is excluded. The soil is kept too low in temperature by constant evaporation at the surface, and by exclusion of the sun's rays, plants are deprived of the supplies of food which new supples of air would constantly afford, and the delicate fibres imprisoned and choked, and drowned out in greater or less degree, in proportion to the extent of the evil.

When air and rain can permeate freely, a constant supply of both gaseous and aqueous nourishment is afforded, independently altogether of the richness of soil, whether natural or artificial. On the other hand, if the soil be compact, or baked hard by drought, in consequence of its natural condition, or of its having been previously worked and stirred when too wet, no plant can flourish.

Sandy soils are never liable to these conditions, unless when they have a clay stratum lining underneath very near the surface. All the water they absorb sinks deep into the subsoil, and far below the roots of corn or any agricultural plant on the surface. Such a soil needs neither draining nor sub soil plowing. Neither does it ever require to be exposed to the frosts of winter, or any kind of treatment by implements for its physical amelioration. It is almost always in such an open, friable state that it may be plowed and sown at any season. The cultivation is easy, and executed at moderate expense, and with moderate care and judgment in their management their fertility is easily maintained. For these reasons we have several times urged that lands of this character are not sufficiently appreciated, for we find them in many parts of the country thrown out of cultivation and laying waste.

In such descriptions of land, however, it often happens that beds of clay lie alternately with those of sand, at different depths, beneath the surface. These beds not unfrequently crop out or approach so near the surface that the water does not get readily away, and even a sandy surface soil is kept too wet for the good of growing plants. In such a case, draining is the proper remedy.

It is well, however, to know that this remedy may often be applied at much less cost than if it were necessary to seek an outlet in some low ground at a considerable distance from the land to be drained. If there be wet and dry places in the same field, we may be assured that a bed of clay or other impervious earth lies beneath the wet, and a porous sub-soil beneath the dry places. A drain of sufficient depth opened and filled nearly to the surface with stones or loose gravel from the wet to the dry places will render the whole dry. A very short drain will sometimes effect this quite as well as one made at four times the cost to convey the water to a stream or a ravine.—*Baltimore Sun.*

For the Ohio Farmer and Cultivator.

LORAIN CO. FARMERS' CLUB.

At the annual meeting, April 7, the election of officers resulted in the choice of R. Baker, President; R. M. Carter, and F. M. Hopkins, Vice Presidents; J. O. Metcalf, Secretary.

Monthly meetings, first Saturday of every month at 1 P. M.

Subject of Discussion at April meeting—The best method of Renovating old Grass Lands.

President Baker recommended where it is not advisable to plough, to harrow, sow grass seed, and brush over with top dressing.

G. W. Young had renovated worn out grass lands by ploughing, and had tried no other method.

J. O. Metcalf had seen favorable results from top dressing old grass lands either with green manure or ashes, leached or unleached; a coat of leached ashes 2 or 3 inches thick on clay land had quadrupled the crop for two or 3 years.

S. B. Herrick had tried putting on 25 or 30 loads of green manure to the acre, and trebled his hay crop, but thought it injured its quality by increasing the June grass.

Amos Briggs sometimes thought our clay lands ought never to be turned over. The Lord made it right side up at first. At the same time there is no difficulty in keeping up old grass lands. And we need something besides manure. Pasturing with sheep has proved beneficial. Timothy grows too much in clusters. More seed should be sown.

Stanley Parmely had found no place where manure did more good than top dressing grass lands.

Robbins Burrell has never tried top dressing or anything but ploughing. But on his ground has surface manuring gratis from the river, which he knows to be of great value.—Has found a half bushel of timothy seed to the acre much better than a peck. Believes in ploughing up grass lands occasionally.

Josiah Pope has great faith in underdraining for the renovation of meadow. In England had seen one piece of land called too dry for grass, which a new owner underdrained five (5) feet deep, and the result was a four-fold crop. Had also seen excellent results from top dressing in fall.

F. M. Hamlin had experience of hard clay soil, which he had thought was right side up at first, but it would run out to blue grass.—Had tried top dressing, but it lasted only two or three years. Ploughing had not succeeded, did not get so good a turf again. June grass was his great trouble. Suggested turning over as lightly as possible, only the turf, sowing on grass seed and nothing else.

A. Beebe, jr., had tried abundant manuring without any ill effects. Tried leached ashes unsuccessfully. Found scattering dry straw on grass land in fall or winter beneficial. Sowed 12 quarts timothy seed instead of 4 quarts.

R. M. Carter had seen fine results from leached ashes on sandy loam; great results from draining and subsoiling. Found no difficulty in renovating grass lands with plenty of manure. Lack of manure is the trouble. Should try harrowing old grass lands and more seed.

N. B. Gates endorsed leached ashes for grass or wheat very fully.

President Baker said—Thorough underdraining is the great thing.

Subject of discussion at May meeting—The best method of Preparing and Cultivating an Apple Orchard. J. O. Metcalf, Sec'y.

OSAGE ORANGE CULTURE.

During the late non-intercourse of peaceful people between the timberless fields of the prairie States and Bois d'Arc regions of Texas, there has been a constant inquiry for the seed of this hedge plant which had just come to be appreciated when the supply was cut off. Now the highway of trade is open again and the keen scent of the dealer in whatever will bring gain, has brought into the market a supply of the coveted seed, and our correspondents ask for a repetition of the mode of culture.

We commence by saying—look well to the seed. It is barely possible that the urgent demand has incited the cupidity of some unprincipled adventurers to throw upon the market an article which will be about as likely to grow as the Connecticut inventions of wooden nutmegs or oats made out of shoe pegs. Believe not every spirit, but try the spirits,—will be as safe in the matter of Osage orange seed as in demonology.

To prove this seed, take a few average grains and drop them into a cup of hot water; let them remain in this water, near the fire so as to be kept milk warm, for a day or two, then put them between two turfs, after the manner of sprouting cucumber seeds, still in a warm place, and within a couple of weeks you will

see whether there is any come up in them. If you have access to a hot-bed, under glass, the experiment had best be tried in that.

Having settled the question as to the quality of the seed, wait until near the time for planting arrives, which is the same as for corn—say during the first half of May, put the seed in hot water as above, change to fresh (cool) water after two days, let it soak two or three days longer, then plant in rows in the seed bed, finely prepared in warm soil, the same as for carrots. Keep the surface clean and mellow during the season, and the next spring transplant to the hedgerow where they are to stand.

This is the whole operation of starting an Osage orange hedge as we have learned by an intimate connexion with the business for the the last fifteen years.

In reply to frequent inquiries, we would say, that we do not deal in seeds or anything else except the regular business of publishing our paper.

TREE PLANTING.

Of Proper Soil.—Each kind of tree has a soil peculiarly its own. In that soil it will do better than any other tree. The subject, then, is one of some moment.

Science may some day explain this with exactness; practice and experiment have taught us chiefly what we know so far. They have taught us that an oak, beautiful on our neighbor's clayey soil, would languish in our light sandy loam; and a pine on ours—"the envied of all beholders"—would be as equally uneasy on his stiff ground. We have been enabled to learn what trees are well adapted to certain soils—in what soil any given tree will do well.

This is of more importance to the man of small means than to the man of fortune. The latter can have any tree he chooses, because he can make the soil to suit.

To illustrate the evil of inattention to soil, take the silver maples employed as shade trees n Philadelphia; where they are more generally used than any other tree. You may find it in every situation, till you believe that shade tree and silver maple are considered synonymous. For ground wet or dry, for soils light or heavy, it is all the same. Thus, it often finds itself in circumstances every way unsuited to it. The leaves become small; the growth short and meagre; the trunk hide-bound, and the branches covered with mosses and lichens. They live and grow—perhaps for years—but never to satisfaction. Scores of such specimens may be seen at any time in our streets. The blame is too often thrown on the wrong source. The nurseryman is charged with selling bad trees, and the remedy sought for in trees purchased from another dealer, "which also, in their turn, must follow them."

The number of species and varieties is now so great, that a fine collection of trees may be had in even a piece of ground with one uniform soil. Variety is generally pleasing; and the smallest lot might as well have its half-dozen trees of different kinds, as in one monotonous sameness. If one tree only be wanted, I prefer it to be different from one's neighbor's adjoining. In addition to the charm of variety, which is added to the pleasure of shade, emulation has here an innocent outset for its conrse, which will not fail to bring its gratifying reward.

One objection to variety, so far as shade trees is concerned, is its cost. A nurseryman can afford to sell a quantity of one thing for less, than for small lots of different ones. But on reflection, few would be willing to forego the pleasure of that variety which is one of the charms of natural beauty—one of the means by which we contrast that which is superior with that which is beneath—and rest satisfied with the only change brought by the seasons, and the only pleasure that brought by its shade, when a trifling cost in the original outlay will "add all these things unto them." The saving of a dollar in a gratification which is expected to last for life, is a consideration which will have little weight when duly reflected on. A little extra expense in a selection of trees, a little extra thought on appropriating each to its most proper soil, and a little extra care bestowed on their removal and replanting, will be amply repaid in the future beauty, variety, health, and luxuriousness of shade trees —*Meehan.*

Depend on Yourself.—Most young men consider it a great misfortune to be born poor, or not to have capital enough to establish themselves at their outset in life in a good and comfortable business. This is a mistaken notion. So far from poverty being a misfortune to them, if we may judge from what we every day behold, it is really a blessing; the chance is more than ten to one against him who starts with a fortune.

"Man, born of woman," often dies of her.

The Sheep Department.

For the Ohio Farmer and Cultivator.

HANDLING EWES.

The necessity of carefully handling ewes heavy with lamb cannot be too often urged upon farmers. Rough handling at this season is attended with more or less danger, for if a ewe is thrown violently upon her side or back the fœtus is sometimes dislocated and causes serious trouble.

Handle your sheep gently. Take up a ewe when heavy with lamb and place her in proper position for tagging, and so as to give her no distress and then perform the operation as soon as possible, and help her on to her feet again. Very valuable Spanish ewes are sometimes tagged while standing, which is perfectly safe, but attended with too much labor to be followed up to any great extent. It is not the position a ewe lies in if not cramped that injures her, but the rough manner in which she is handled.—

Lorain Co., O. SHEPHERD.

For the Ohio Farmer and Cultivator.

BLACK MUZZLE IN SHEEP.

Indicated by scabs appearing on the nose, lips and corners of the mouth. The lips swell and crack, and become so sore that it is with great difficulty the animal can eat enough to sustain life, and if not cared for will die of starvation. Last winter I had one hundred thus affected, and by the advice of a friend, procured 3 lbs. blue stone, (blue vitriol) dissolved it in about two gallons of boiling water, and when cold, stuck every sheep's nose into the liquid nearly to its eyes. On the third day the scabs had nearly all disappeared, but to make assurance doubly sure, I gave them all another dip and have had no trouble on that score since.—This remedy proved valuable to me, and may to others. It costs me nothing, and I am willing to dispose of it at the same price. Try it.

Kenton, March, 1866. D. NEWCOMB.

STATE SHEEP SHEARING.—Let all our wool growers bear in mind that the great Shearing and Exhibition of Sheep, under direction of the Ohio Wool Growers' Association will be held at Wellington on the 15th and 16th days of May.

SORE BELLY ON SHEEP.

A subscriber,—T. K. Mc. G., residing in Lawrence Co., Pa., says he has a sheep from which the wool is coming clean off the belly and the skin is sore, with an offensive smell, &c. He writes to know if this is the scab and what should be done in such a case.

We should say that this sheep has been allowed to lie on heating manure which has got up a foul skin. If this supposition is correct, the first thing to be done is to clean out the shed of this disease breeding element and give all the sheep a clean bed. To heal the sores, clean the parts by sponging with weak soap suds and then apply an ointment made of lard two parts sulphur one part, with a small bit of tar or rosin. This trouble is not the regular scab.

HONEY BOXES.

G. WRIGHT, Dean's Corners, N. Y., says:—I put boxes upon beehives 30 years ago, making one inch auger-holes through the tops for the bees to come up into the boxes. Result: no honey. I then made a mortice one inch by three, and never after failed of having the boxes well filled. I have taken 40 lb. from a hive in a season, and the bees would seem to do equally as well as other swarms that had none."

A. B. WOOD, Jefferson N. Y. says the cap which covers the honey boxes should fit so tight upon the top of the hive that no light can penetrate. He uses two boxes, and five three-quarter inch holes under each box.

L. W. PECK, Eagleville, Ohio, fails to obtain honey from cap-boxes placed on top of the hive, but he is quite successful by another arrangement. He says:

The boxes instead of being placed on the top are in the form of drawers, three upon each side of the hive, closed in all around and having doors at the back part to open and pull out the drawers. The lower part of the bottom drawer is about two inches above the base of the main hive, and projects in two inches, and the next and next, each two inches beyond the one above, so as to allow openings for the bees to enter the drawers through the bottom boards of each. This contracts the interior of the hive six inches narrower than the bottom and gives a slant to the outside covering the drawers. The front and back are upright. Hives generally give two to four, and sometimes six, drawers of surplus honey.—*Trans. N. Y. Farmers' Club.*

The Horseman's Department.

For the Ohio Farmer and Cultivator.

HORSES FOR GENERAL USE.

DISCUSSION AT LORAIN CO. FARMERS' CLUB.

SUBJECT—The best breed of Horses for General Uses, and the best method of rearing horses.

The meeting was called to order by President BRIGGS, who remarked that among the animals, the Horse is the greatest gift of God to man. The raising of the horse has been neglected, especially through this section of country. In Geauga and Ashtabula counties there are better horses, and farther west better than on the Reserve. There is a class of horses better understood than they used to be—the 1100 to 1200 lbs. horse. So much does not depend on the horse as on the raising. Through improper usage many are ruined before coming to market.

D. A. STOCKING.—1150 lbs horse will be heavy enough for coach, draft or roadsters, by having regard to speed as well as size. If for one market, I would breed a larger class. The highest prices are obtained for the horse 16 to 16½ hands high, for coach. Color should be a bright bay, black legs, mane and tail. Long neck, short in back, rather large foot with wide heel. Amiable disposition. In breeding, as much pains should be had with regard to a good dam, as to the sire. Moderate speed. For a draft horse, the Norman crossed with the Pennsylvania mares. These in Ohio would be profitable as they would make good draft horses.—The Peck or Canadian horse has made good stock, but better for the home than for distant markets, as they are rather too small. As for the Morgan, Ohio would not have been worse off if there had not been more than five or six fetched into the State. Others, if speed had been bred, would have paid more. Our horses have depreciated since the introduction of the Morgan. It would be well for Lorain county to send a committee East to select a good horse, and then by selecting good mares, our horses would be improved, as the colts will take more after the mare than the horse. Let us have more size and speed.

B. Jackson — Have raised but one colt; would prefer larger horses.

Hiram Hall—Has raised but few colts. We have made a mistake in getting the Morgans here; they are adapted for the New England mountains, but here they are not large enough. Would prefer horses to weigh about 1200. Mr. Rarey has informed the people as to the best management of horses.

Mr. Hamlin—I like a good horse. My views coincide with Mr. Stocking's. Our horses are running down. It costs no more to raise a good colt worth $100, than a poor one. Hopes a move will be made to secure a better class. Many colts are injured by breaking too young.

Mr. Hopkins—Has not found a pair of horses to plow up with, that is to a sufficient depth, and walk right through. 1200 or 1400 lbs. are not to heavy to plow.

Robbins Burrell—Has owned a good many, and likes a good team. Believes with others that we need an improvement. Has had from 17 hands down—from 1400 lbs. to 1000 lbs. Prefers small horses, say 1000 lbs. If he was going to break up would not attempt it with one team. Even if they did weigh 1400 lbs, always puts on two span. Would rather have horses that could move light and quick. Large horses do not answer, had one after letting for a day, would not be fit for work the next day, when a 1000 lb. horse would kick up his heels. Horses are generally put to work too young. I never owned a horse that I broke myself that was balky.

D. A. Stocking—Will differ from Mr. Burrell. I know it is important to plow deep. He will put on two teams; we are not all able to put on two teams. But few keep two span, moreover we have to feed two span for plowing, may be, 1 inch deeper. Let us breed with action, which we can even if he does weigh 1200 to 1400 lbs.

L. F. Parks—At our last meeting, in introducing this question for to-day, I did not expect you would look upon me as more of a horse man than others. My object was to bring out a concert of action on the subject, get at an understanding, and procure a good horse. My views may not harmonize with some. Believes in 1200 to 1400 lb. horses, and would prefer the latter. Have not seen a good horse this size; we have sacrificed the size for speed. There are horses with action and speed weighing 1400 lbs. We may harmonize on 1200 lbs. There is a horse called Berkshire in Massachusetts; his colts are fine and large, but not quite large enough; they sell for high prices.

There is a strong feeling towards getting a good horse for the county. The feeling seems

to indicate that such a horse would be encouraged and appreciated, and would have sufficient mares at a moderately high fee.

Question for next meeting—"The best method to restore old pastures."

Some garden seeds from Commissioner NEWTON were distributed. These were of the most cultivated kinds, which could be obtained at any common seed store. The people do not wish for them, but expect from that Department new and scarce varieties, even if but few.

After sometime spent in general remarks, the Club adjourned to meet the first Saturday in April, which will be the annual meeting for election of officers. B.

For the Ohio Farmer and Cultivator.

WORMS IN HORSES.

I have a mare which has been troubled with worms for some time, have tried Condition Powders, tobacco, ashes and salt, but they do but little good. What do you or your readers say best to do? G. W. L.

ANSWER.—In speaking of worms, we presume our correspondent refers to the round white worm, as the most common in the intestines of the horse. These worms seem to have a spontaneous growth in the stomach from which they find their way to the intestinal canal, and cause irritation and consequent bad condition of the animal. Any treatment to be effective must embrace the removal of the morbid cause which produces the worms. They are frequently expelled by the use of castor oil, wood ashes, aloes, &c., but the expulsion of the worms should be followed by alteratives and vermifuges combined, for which Dr. Dadd prescribes:

White mustard seed (whole,) powdered mandrake, sulphur, powdered wormseed (*chenopodium anthelminticum,*) of each 2 ounces; salt, ginger, and charcoal, 2 ounces, poplar bark 1 pound. Mix. Dose, one ounce, night and morning, in the food. Under the exhibition of this medicine, aided by proper dietary regulations, the animal will gradually improve in condition, and in the course of a short time the worms will disappear. Should the rectum abound in pin worms, an injection of salt will be indicated.

The following vermifuge is occasionally prescribed and it has, in some cases, brought away large quantities of worms:

Castor oil 12 ounces, oil of wormseed 1 ounce, oil of tansy 3 drachms. To be given on an empty stomach, followed by mashes of *fine feed* or *shorts*, well seasoned with salt. To be repeated, if necessary, until the bowels respond.

THE LETTUCE.

The Romans esteemed this vegetable a clearer of the senses. They were anciently eaten at the conclusion of their supper; but in the time of Domitian they changed this order and served them with the first entries of their feasts. The wild lettuce, as well as the cultivated, was used medicinally by the Romans; and Paladius, a Greek physician, notices their culture in his treatise on fevers. We find no attempt to cultivate the lettuce in England until the fourth year of Queen Elizabeth's reign, 1562; but in 1597, Gerard gives us an account of eight kinds of lettuce that were then cultivated in England. He says: "Lettuce maketh a pleasant salad, being eaten raw, with vinegar, oil and a little salt; but if it be boiled, it is sooner digested, and nourisheth more."—He adds: "It is served in these days and in these countries, at the beginning of supper, and eaten first before any other meat; but notwithstanding, it may now and then be eaten at both these times, to the health of the body; for taken before meat it doth many times stir up the appetite; and eaten after supper, it keepeth away drunkenness, which cometh by the wine; and that is by reason that it staieth the vapors from rising up into the head." He says: "Lettuce cooleth a hot stomach, called the heart-burning, &c.

GROWTH OF TIMBER.—It is a singular fact that what was vast treeless prairies in Illinois twelve years ago are now covered with a dense growth of thrifty young forest trees, comprising various species of oak, hickory, cottonwood, ash, &c. So rapid has been the change in many localities that where some of the early settlers located, twenty-five years ago without a tree around them they can now hew good building timber a foot square. Prairie land, when kept from the annual fall burning formerly practiced by the Indians, rapidly produces a growth of trees. Some of the oldest citizens who greedily located the timber land when they came to the country, and were careless about acquiring prairie, now find the latter of more value than the former, their timber having grown faster than they used it.—*Ex.*

For the Ohio Farmer and Cultivator.

DEFUNDEN.

FROM THE GERMAN OF GOETHE.

As into the forest
I strolled away,
Heedful of nothing,
As was my way,

In shadow saw I
A flow'ret stand,
Glittering star-like,
A little eye bland.

I thought to pluck it,
When spoke it fine;
"Must I be broken
To wither and pine?"

Unbroken I digged out
Its little root all,
To the garden bore it
To a house fair and small,

And set it again
In a still, still place;
Now, ever it branches
And blooms in grace.

DON LOYD WYMAN.

UNDER YOUR HAT.

In this country every man of sound mind is a capitalist. You, Sir Reader, of the threadbare coat, and vacuous wallet deny it utterly. You insist that your brain is healthy and well furnished, but intimate with a sneer that if any conjurer will make discovery of your capital, you will doff your napless hat to him, and be his to command for evermore. Sir, put on your rusty beaver, and we will tell you where your capital is. *Right under it.* We will suppose there is common sense, a fair stock of worldly knowledge, and plenty of energy within the circle of felt that you have just crowned yourself withal. *That's* capital—*"working capital"* of the best kind. If you don't think so, you are over modest, and the sooner you get rid of your diffidence the better for you and yours. Why, man, such a head as yours is better than the philosopher's stone. It is an engine that only requires to be set at work, to procure you all the comforts and enjoyments that a rational being can desire.

As to wealth—its elements are lying in their crude state on every side of you, and only require persevering manipulation to convert them into the circulating medium. Indigent! With brains and health you have on *right* to be indigent in a country whose magnificent resources are out of all proportion to the number of heads and hands there are to delvelop them. Fifty roads are open to you. Take the one that suits you best and push ahead. But you must *push* not *loiter*. Take this piece of homely advice, and our word for it, your coat hereafter shall be of glossy broadcloth with all accessories to match. Don't lean on friends, don't borrow, don't wait for dead men's shoes, don't tarry for something to turn up, or ten to one it will be the world's nose at your lack of pluck and industry. Employ the capital *under your hat.* Work it wisely, honestly, resolvedly, and the returns are sure to be satisfactory.—*Ex.*

HORTICULTURAL DIVINITY.

Last Sunday we were edifiying ourself in reading from the Scripture Observations of THOMAS FULLER, D. D., of the Church of England, written about the year 1630, and coming upon this passage it struck us as worthy of a place in a rural publication like the *Ohio Farmer*, and accordingly present it to our readers for their edification:

"Lord, I read that thou didst make grass herbs and trees the third day. As for the sun, moon and stars, thou madest them on the fourth day of creation. Thus at first thou didst confute the folly of such who maintain that all vegetables in their growth are enslaved to a necessary and unavoidable dependence on the influence of the stars. Whereas plants were even when planets were not. It is false that the marigold follows the sun, whereas the sun follows the marigold, as made the day before him. Hereafter I will admire Thee more, and fear astrologers less; not affrighted with their doleful predictions of dearth and drouth, collected from the complexions of the planets. Must the earth of necessity be sad because some ill-natured star is sullen? as if the grass could not grow without asking it leave. Whereas Thy power which made herbs before the stars, can preserve them without their propitious, yea, against their malign aspects."

How often, when we have been nearest each bodily, have we really been farthest off. Our tongues were the withy foils with which we fenced each other off.

Our sadness is not sad, but our cheap joys. Let us be sad about all we see and are, for so we demand and pray for better.

Editor's Table.

THE WOOL COMMITTEE.

Our Committee of the National Wool Growers' Association, having as they supposed, completed all the preliminaries with the Committee of the National Manufacturers' Association, at the protracted conference in New York, adjourned on the 9th of February, and went to their homes, as noted in the *Ohio Farmer* of Feb. 17th. Then a difficulty seemed to present itself to the President of the National Manufacturers' Association, and he made overtures for another meeting at Philadelphia. It seemed that the wool growers' Committee had gone as far as common courtesy should demand, but the matter in issue was of too much consequence to be left in jeopardy by standing upon a point of etiquette, so taking counsel of such wool growers as could be readily reached, our Committee were remanded back to duty, and like faithful men as they are, they proceeded to Philadelphia and thence to Washington, where they have been "sitting up" with the tariff question until it has taken definite shape in the form of a bill, a copy of which is before us, the details of which we are not now at liberty to make public.

Having accomplished thus much — as we learn in harmony with the Committee of the Manufacturers, we presume our Committee closed their labors in Washington last week, and retired from the field. When this Committee entered upon their duties, we all supposed that a week or two of time would be amply sufficient to work up the case to a final issue, but they were confronted by another Committee which had been so long accustomed to carrying their point by arithmetic, philosophy, patience, courtesy—not to speak of other elements of power—that in order to succeed, every quarter inch of the ground had to be fought over with the nicest precision. Col. RANDALL brought his powerful intellect to bear, and it was all he could do at times to restrain his high mettle from a pyrotechnic ex[illegible] but the cool endurance of EDWIN HAMMOND, the keen analysis of Hon. E. B. POTTLE, and the never-failing patience and thorough application of Hon. R. M. MONTGOMERY, carried the conference from day to day and from week to week, until this end is finally reached, and the result of all this labor is in the hands of the Committee of Ways and Means in Congress, in the best possible shape for us to hope for success.

Now the expenses of this Committee should be promptly met by contributions from all the Wool Growers' Associations of the country, and by individual wool growers who do not belong to such associations. As Treasurer of the Ohio Wool Growers' Association, we make this statement now to remind the local societies of their duty and privilege towards a committee who have performed an arduous labor and done their work well. We shall shortly make a formal call (by circular) upon the officers of local Associations for this purpose. Individuals not associated with societies, may take the hint now and send in a V or an X as they feel disposed.

THE NEW YORK STATE FAIR will probably be held this season at Saratoga. The time has not been determined upon. A public trial of farm and harvesting implements is to be held at the proper time, probably at Auburn.

PRODUCE EXPORTS.—Since the first of January, the total exports of produce and merchandise from the port of New York amount to $57,000,000.

TRUMBULL COUNTY.—The Trumbull county public Sheep Shearing, under the management of the Wool Growers' Association, will take place on the Fair Grounds at Warren on the 8th of May.

REMOVED.—Our friend and correspondent, Mr. R. BAKER, has disposed of his interests in Avon, Lorain county, and removed to a farm near Elyria. Hereafter his post office address will be Elyria, Ohio.

NEW AND SEASONABLE BOOKS.—J. E. TILTON & Co. will publish next week two most elegant and appropriate books for this season, viz: "THE BOOK OF ROSES," by FRANCIS PARKMAN, and the "CULTIVATION OF THE GRAPE," by W. C. STRONG. These books will take the first rank among American publications for completeness and beauty, and in their specialties will become standard authorities. Great care has been taken in their production both by the writers and the publishers, and the sales will undoubtedly be very large.